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Climatological Data for September, 1909.
DISTRICT No. 1, NORTH ATLANTIC STATES.

WILFORD M. WILSON, District Editor.

GENERAL CLIMATOLOGICAL CONDITIONS.

The month of September, 1909, was generally pleasant throughout the district and on the whole rather uneventful. The principal features were the rather remarkable tendency of the average temperature to remain below the normal that has characterized the conditions during the past three months, the absence of severe storms, except over a limited area, and the continued deficiency of precipitation over most of the district.

TEMPERATURE.

The average temperature for the district as a whole was about 1° below the normal, Maine being the only considerable part where the mean of the month was above the average. The departures from the normal were greatest in Virginia and West Virginia where the deficiency averaged about 2.5° daily. In the extreme southern part of the district and along the coast of Virginia the deficiency was generally greater than elsewhere, amounting to somewhat over 3.5° per day. The variation of the departure from the normal was rather remarkable, the month being warmer than usual in parts of Maine by about 2.5° and colder along the coast of Virginia by about 3.5°, making a total variation of some 6°. New Jersey was the warmest section in the district with an average temperature of 64.5° and New England the coldest with 59.8°.

There were three warm periods during the month, but at no time was the heat excessive for the season. The first warm period occurred on the 3d and 4th and was general over the district. In parts of New England the highest temperatures of the month were recorded on these dates. A somewhat prolonged warm spell occurred during the early part of the second decade, culminating on the 13th and 14th when the maximum temperatures of the month were recorded at most stations in the district. The highest temperature recorded, 96°, occurred at Addison, Steuben County, N. Y., on the 14th and at Lawrenceville, Tioga County, Pa., on the same day, elsewhere the maximum temperatures were generally not much above 90°. In New England the highest reported was 85° on the 23d when the third warm period of the month overspread the district. While the temperature was quite variable during the first and second decades and frosts occurred generally on several dates, especially during the latter part of the first decade, no decidely cold weather developed until about the 19th, when an area of high pressure accompanied with clear skies covered the district. This condition caused the temperature, especially during the night of the 18th, to fall rapidly, reaching the frost point in the interior of New England and the more elevated parts of New York on the morning of the 19th. The coldest weather of the month, except in New England, occurred on this date when killing frosts were general in New York, Pennsylvania, West Virginia, and at interior points in New Jersey and Virginia.

PRECIPITATION.

The average precipitation for the district was nearly normal, but the distribution, like that of the preceding month, was remarkably uneven, limited areas, particularly in New England, receiving more than 10 inches of rain during the month, while over most of the Susquehanna watershed only little more than half the usual amount occurred. The rainfall in New England was everywhere above normal and ranged from 3.75 inches for the month in Rhode Island to 7.39 inches in Maine. In the north-central part of Maine the rainfall was very heavy in many localities, Debsconeag reporting a monthly total of 10.27 inches, Greenville, 10.12 and Madison 10.40, most of which fell during the third decade. The rains were of great benefit throughout the section, thoroughly saturating the soil and filling the brooks and streams, although in parts of Maine where the fall was excessive there was some damage from high water.

For the remainder of the district there was quite a decided deficiency, notably in New Jersey, New York, and parts of Maryland and Virginia. The rainfall over the Delaware watershed, while generally below normal, amounted on a average to about 3 inches and although not sufficient to effectually break the drought in that section tended to materially relieve a situation that caused much anxiety at the close of the preceding month. The greatest deficiency in the district occurred over the Susquehanna Basin and about the headwaters of the Shenandoah and Rappahannock rivers, where the monthly amounts were but little more than half the normal.

Rains were general over the district on the 4th and 5th, the 10th and 11th, the 16th and 17th, and the 23d and 24th.

RIVER CONDITIONS.

Notwithstanding the fact that the rainfall over most of the Delaware watershed was considerably greater than during the month of August the soil was so dry that practically none of the water has found its way into that stream. In fact the gage readings made at Port Jervis, Phillipsburg, Trenton, and Reading during September show a lower stage of water than during August and practically the same conditions exist with respect to the Susquehanna as indicated by the readings at Harrisburg.

The recent rains in New England, particularly in the northern part, have caused a high stage of water in most rivers and streams in that section but in other parts of the district the flow of water in the rivers is scanty.

MISCELLANEOUS.

The average number of rainy days was greatest in New England, about 10, and least in West Virginia, about 4. The sunshine for the month was slightly above the average over the southern part of the district but decreased steadily northward to New England where it was somewhat below the normal. There was no snow during the month.

TABLE 1.—*Climatological data for September, 1909. District No. 1, North Atlantic States.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Maine.																			
Bar Harbor	Hancock	20	23	58.2	− 0.4	79	11	36	13	33	8.35	+ 4.67	2.60	0.0	9	13	6	11	sw.	William Miller.
Cornish	York	778	54	59.4	+ 0.6	81	23	35	20	38	5.54	+ 1.93	1.73	0.0	11	13	6	11	nw.	T. H. West.
Eastport	Washington	53	37	56.0	+ 0.8	71	3	44	20	24	6.40	+ 3.43	2.16	0.0	11	5	7	18	s.	U. S. Weather Bureau.
Fairfield	Somerset	90	24	59.2	+ 1.5	78	4	36	20	32	5.61	+ 2.52	2.73	0.0	6	14	6	10	.....	E. F. Parker.
Farmington	Franklin	450	12	57.8	− 0.3	78	3†	30	20	44	7.74	+ 4.23	2.78	0.0	11	14	5	11	s.	State Normal School.
Gardiner	Kennebec	163	17	59.6	− 0.2	80	3†	33	20	36	6.39	+ 2.94	1.89	0.0	11	15	3	12	sw.	S. D. Soule.
Greenville	Piscataquis	1,000	5	54.2	.....	75	4	27	8	40	10.12	.....	3.87	0.0	12	.....	.....	.....	.....	U. S. Weather Bureau.
Houlton	Aroostook	362	7	53.6	.....	76	4	31	18	41	6.14	+ 2.82	.....	0.0	7	17	3	10	n.	Bangor & Aroostook R.R.
Lewiston	Androscoggin	185	35	57.8	− 1.4	78	3†	36	20	37	6.14	+ 2.58	2.24	0.0	11	11	9	10	s.	Union Water Power Co.
Madison	Somerset	257	6	57.4	.....	79	5	33	20	38	10.04	.....	4.87	0.0	11	18	3	9	s.	Wm. Jardine.
Millinocket	Penobscot	386	6	58.4	.....	80	4	32	8	39	9.70	+ 5.46	3.23	0.0	14	9	9	12	sw.	H. S. Ferguson.
North Bridgton	Cumberland	450	16	60.2	+ 0.4	82	3†	35	20	35	6.13	+ 2.20	3.07	0.0	11	9	11	10	se.	G. E. Chadbourne.
Orono	Penobscot	129	40	59.2	+ 2.1	80	4	33	8	38	9.09	+ 5.22	2.62	0.0	11	13	4	13	sw.	Agricultural Exp. Stat'n.
Patten	Penobscot	550	7	57.7	.....	78	4	29	8	40	9.71	+ 5.23	2.60	0.0	9	11	4	8	w.	Bangor & Aroostook R.R.
Portland	Cumberland	99	38	58.8	− 0.8	78	3	41	20	25	4.68	+ 1.48	1.50	0.0	12	8	12	10	s.	U. S. Weather Bureau.
Rumford Falls	Oxford	505	16	57.7	− 0.1	78	23	38	8†	32	7.08	+ 3.79	2.45	0.0	12	17	5	8	nw.	Chas. A Mixer, C. E.
Van Buren	Aroostook	510	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bangor & Aroostook R.R.
Winslow	Kennebec	90	14	58.8	− 0.5	83	14	32	20	40	6.71	+ 3.26	1.73	0.0	8	13	10	7	s.	Hollingsworth & Whitney
New Hampshire.																				
Alstead Center	Cheshire	1,120	5	56.8	.....	76	23	37	20	28	4.15	+ 0.14	2.10	0.0	10	14	5	11	nw.	Frank Dewing.
Benton[b]		.....	.....	55.5	.....	74	4	35	19†	30	4.87	.....	1.69	0.0	10	16	9	5	nw.	State Sanatorium.
Bethlehem	Grafton	1,470	17	55.6	− 0.9	76	14	32	19	35	7.97	+ 4.22	3.00	0.0	10	14	7	9	sw.	Benj. Tucker.
Concord	Merrimac	350	49	59.0	− 0.1	82	23	33	20	37	4.15	+ 0.94	1.19	0.0	12	9	7	14	se.	U. S. Weather Bureau.
Durham	Stafford	88	14	59.9	− 0.6	84	4	30	20	42	4.34	− 0.29	0.81	0.0	11	15	5	10	se.	Agricultural Exp. Stat'n.
Franklin	Merrimac	440	10	59.7	.....	85	23	31	20	40	3.52	− 1.43	1.22	0.0	11	16	4	10	nw.	Dr. C. P. Webster.
Grafton	Grafton	863	23	56.2	− 0.7	80	3	24	20	46	4.60	+ 0.36	1.65	0.0	9	17	1	12	se.	P. R. Kimball.
Hanover[a]	Grafton	603	75	58.4	+ 0.6	83	14	30	20	41	3.45	+ 0.03	1.31	0.0	12	5	13	12	sw.	Dartmouth College.
Keene	Cheshire	506	24	58.6	− 0.5	83	23	29	20	44	4.12	+ 0.61	1.38	0.0	11	12	9	9	nw.	Samuel D. Wadsworth.
Nashua	Hillsboro	125	24	60.8	− 0.3	85	23	35	20	38	3.71	+ 0.18	0.84	0.0	11	10	10	10	n.	Jackson Company.
Newton	Rockingham	.....	21	58.3	− 1.8	81	3	30	20	38	4.88	+ 1.07	1.02	0.0	9	7	17	6	sw.	W. C. Gale.
Plymouth	Grafton	500	21	56.9	− 0.5	79	23	25	30	43	3.70	− 0.23	0.87	0.0	7	18	1	11	w.	Mrs. H. G. Trow.
West Ossipee	Carroll	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.0	.....	.....	.....	.....	.....	Camp Ossipee.
Vermont.																				
Bloomfield	Essex	.....	2	55.8	.....	78	4†	30	8	40	5.57	.....	1.94	0.0	12	17	5	8	s.	Lyman Falls Co.
Cavendish	Windsor	910	6	57.4	.....	83	14	29	20	41	4.45	.....	1.53	0.0	6	13[b]	5[b]	10[b]	.....	Miss M. A. Kingsbury.
Chelsea	Orange	1,640	14	54.0	− 2.2	76	14	33	19	31	3.22	− 0.22	1.20	0.0	9	13	4	13	s.	W. F. Dewey.
Jacksonville	Windham	1,000	24	54.9	.....	78	14	31	19†	40	5.45	.....	1.60	0.0	9	18	3	9	.....	Miss Martha French.
Manchester	Bennington	980	10	56.6	.....	80	14	35	20†	36	4.60	− 0.39	1.71	0.0	10	10	13	7	sw.	N. M. Canfield.
St. Johnsbury	Caledonia	711	16	59.7	+ 2.3	86	21	32	19	50	3.73	+ 0.09	1.36	0.0	10	15	6	9	s.	Fairbanks Museum.
Woodstock	Windsor	700	17	56.3	− 0.4	80	9	28	19	41	3.92	+ 0.53	2.10	0.0	5	10	8	12	.....	John S. Eaton.
Massachusetts.																				
Amherst	Hampshire	222	20	60.8	+ 0.6	83	14†	35	29	38	4.99	+ 1.33	1.43	0.0	14	15	4	11	nw.	Agricultural Exp. Stat'n.
Blue Hill	Norfolk	640	25	60.2	− 0.8	78	3	41	6	29	4.42	− 0.23	0.92	0.0	12	8	8	14	ne.	Blue Hill Observatory.
Boston	Suffolk	125	39	62.6	− 0.1	82	3	46	20	28	5.15	− 1.96	1.06	0.0	12	8	9	13	e.	U. S. Weather Bureau.
Chestnut Hill	Suffolk	124	29	62.6	− 0.3	83	4†	40	20	35	5.79	+ 2.52	1.08	0.0	10	19	0	11	.....	Metrop. Water Board.
Clinton	Worcester	370	13	60.7	.....	78	4†	37	19	31	4.86	.....	1.87	0.0	11	11	2	17	.....	Metrop. Water Board.
Concord	Middlesex	139	19	59.8	− 1.2	81	23	34	20	36	4.89	+ 1.79	1.19	0.0	12	10	5	15	se.	F. A. Tower.
Fall River	Bristol	200	43	62.2	− 1.7	81	23	43	20	23	3.06	− 0.47	1.31	0.0	8	10	15	5	sw.	C. V. S. Remington.
Fitchburg	Worcester	550	26	60.8	− 0.3	83	23	37	20	35	4.11	+ 0.42	0.96	0.0	12	13	8	9	w.	Dr. A. P. Mason.
Framingham	Middlesex	160	29	61.8	− 0.2	81	4	38	20	37	4.55	+ 1.40	1.18	0.0	11	.....	.....	.....	.....	Metrop. Water Board.
Hyannis	Barnstable	31	18	62.0	− 2.6	77	3	45	13†	26	4.61	+ 1.76	2.06	0.0	11	16	9	5	sw.	C. F. Sleeper.
Lawrence	Essex	51	25	61.2	− 0.6	82	3	37	20	39	4.01	+ 0.49	0.93	0.0	10	7	16	7	e.	Essex Company.
Lowell	Middlesex	100	24	62.6	+ 0.6	81	23	36	20	33	4.21	+ 0.71	1.28	0.0	8	.....	.....	.....	.....	Prop's. Locks and Canals.
Middleboro	Plymouth	53	23	59.4	− 1.5	83	23	33	6†	45	4.33	+ 0.34	1.50	0.0	8	7	8	15	sw.	A. R. Gurney.
Monson	Hampden	420	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.0	.....	.....	.....	.....	.....	Dr. G. E. Fuller.
Nantucket	Nantucket	15	23	63.2	+ 0.4	79	23	53	13	20	3.71	+ 0.98	1.47	0.0	8	8	11	11	sw.	U. S. Weather Bureau.
New Bedford	Bristol	88	97	63.3	+ 1.4	79	1	48	19	22	.....	.....	.....	.....	.....	18	3	9	ne.	City Engineer.
Norfolk	Norfolk	244	6	61.2	.....	82	24	28	20	45	4.57	− 0.65	1.14	0.0	12	13	10	7	se.	Miss Ruby H. Martyn.
Northampton	Hampshire	205	1	60.9	.....	82	14	36	29	35	5.32	.....	2.97	0.0	9	18	6	6	nw.	D. E. Hoxie.
Plymouth	Plymouth	.....	24	60.8	.....	80	24	43	6	28	4.58	.....	1.61	0.0	8	16	5	9	ne.	Miss L. B. Knapp.
Provincetown	Barnstable	40	22	64.4	+ 0.6	83	1	49	20	27	4.75	+ 1.28	2.10	0.0	7	22	0	8	ne.	Gideon Bowley.
Rockport	Essex	25	7	60.4	.....	80	3	46	6†	30	6.21	+ 1.11	1.43	0.0	12	10	8	12	ne.	C. F. P. Bearse.
Rutland	Worcester	1,160	7	59.0	.....	78	23	41	5	27	3.59	− 1.54	1.04	0.0	14	14	5	11	sw.	State Sanatorium.
South Egremont	Berkshire	764	7	56.4	.....	80	14	34	3†	36	3.64	− 1.51	1.60	0.0	10	.....	.....	.....	s.	Roscoe C. Taft.
Turners Falls	Franklin	200	18	60.6	− 0.2	80	23	35	20	29	5.26	+ 1.29	2.48	0.0	9	.....	.....	.....	.....	Turners Falls Co.
Westboro	Worcester	298	35	62.6	+ 0.1	83	23	39	19	37	4.74	+ 1.28	1.50	0.0	12	.....	.....	.....	.....	G. S. Newcomb.
Williamstown	Berkshire	711	28	58.9	− 0.1	81	14	37	20	34	4.27	+ 1.24	1.44	0.0	10	11	8	11	w.	Williams College.
Worcester	Worcester	518	17	61.6	+ 0.2	81	3	44	20†	31	4.07	+ 0.54	0.82	0.0	11	10	9	11	ne.	G. W. Swan.
Rhode Island.																				
Block Island	Newport	26	29	63.1	− 1.0	76	23	54	2	17	3.68	+ 0.68	1.36	0.0	10	10	9	11	sw.	U. S. Weather Bureau.
Bristol	Bristol	53	23	63.0	− 0.7	75	9†	48	19†	21	4.32	+ 0.93	1.55	0.0	10	17	7	6	sw.	N. G. Herreshoff.
Kingston	Washington	250	20	60.8	− 1.6	80	3	41	6†	35	4.62	+ 0.72	2.12	0.0	9	10	11	9	s.	Nathaniel Helme.
Narragansett Pier	Newport	22	27	62.2	− 0.5	77	3†	43	6	32	3.85	+ 0.59	0.86	0.0	10	14	6	10	ne.	U. S. Weather Bureau.
Providence	Providence	182	5	62.0	− 1.2	81	3	42	20	31	3.28	+ 0.09	0.91	0.0	11	9	9	12	n.	Do.
Connecticut.																				
Bridgeport	Fairfield	20	16	63.8	.....	83	23	38	29	36	3.49	− 0.87	0.68	0.0	11	11	9	10	sw.	Wm. Jennings.
Canton	Hartford	900	48	58.8	− 1.7	79	14†	31	29	36	3.96	− 0.70	1.18	0.0	8	13	6	11	ne.	G. J. Case.
Colchester	New London	370	23	61.5	− 0.7	83	4	35	20	42	5.89	+ 2.07	.....	0.0	11	11	6	13	sw.	S. P. Willard.
Cream Hill	Litchfield	1,300	13	60.0	− 1.3	82	23	37	29	34	4.21	− 1.13	1.40	0.0	8	14	8	8	nw.	C. L. Gold.
Danielson	Windham	300	7	60.5	.....	81	14	38	20	39	6.11	.....	2.63	0.0	10	11	11	8	s.	F. E. Bitgood.
Hartford	Hartford	159	5	62.5	+ 0.8	82	14	43	29	32	3.83	+ 0.33	1.55	0.0	10	7	7	16	s.	U. S. Weather Bureau.
Hawleyville	Fairfield	600	11	60.7	− 2.0	83	14	34	29	36	3.74	− 1.31	0.92	0.0	7	14	8	8	w.	E. N. Hawley.
New Haven	New Haven	107	122	62.8	− 1.1	78	3†	42	29	28	3.93	+ 0.14	1.20	0.0	10	11	11	8	n.	U. S. Weather Bureau.
New London	New London	47	39	62.9	− 0.5	79	3	44	20†	29	5.04	+ 1.53	2.19	0.0	9	12	6	12	sw.	T. C. Dillon.
North Grosvenordale	Windham	409	19	61.3	− 0.1	82	3†	37	28	36	4.40	+ 0.78	1.25	0.0	11	12	8	10	ne.	Grosvenor Dale Co.
Norwalk	Fairfield	116	19	62.0	− 0.5	82	23	36	29	38	3.52	− 0.44	1.07	0.0	8	11	11	8	sw.	Geo. C. Comstock.
Southington	Hartford	140	40	61.0	− 1.0	81	23	36	29	41	3.95	+ 0.38	1.50	0.0	9	7	18	5	sw.	Luman Andrews.
Storrs	Tolland	640	21	60.4	− 0.5	86	14	37	30	35	5.32	+ 1.24	2.65	0.0	8	12	12	6	e.	Agricultural Exp. Stat'n.
Torrington	Litchfield	625	8	59.6	.....	83	24	32	29	38	3.91	− 1.69	1.17	0.0	12	11	4	15	s.	E. H. Forbes, Ph. D.
Voluntown[4]	New London	260	24	61.2	0.0	84	3	34	20	48	3.79	− 0.01	2.40	0.0	8	7	8	11	se.	Rev. E. Dewhurst.
Waterbury	New Haven	400	34	63.0	− 0.2	86	14	34	29	45	4.51	+ 0.33	1.39	0.0	10	.....	.....	.....	.....	N. J. Welton.
New York.																				
Addison	Steuben	1,000	19	61.8	+ 0.2	96	14	33	6†	49	3.20	+ 0.41	1.19	0.0	7	19	6	5	sw.	H. R. Ainsworth.
Albany	Albany	97	88	62.2	− 0.1	85	14	40	29	33	2.88	− 0.30	1.39	0.0	12	9	11	10	s.	U. S. Weather Bureau.
Amsterdam	Montgomery	277	5	59.7	.....	85	14	33	29	41	4.19	.....	1.26	0.0	6	20	4	6	e.	Emery Ellwood
Athens	Greene	90	7	62.4	.....	85	14	38	29	38	2.98	.....	1.44	0.0	10	10	13	7	sw.	E. C. Brooks.
Baliston Lake	Saratoga	400	5	58.6	.....	84	14	33	29	40	4.00	.....	1.46	0.0	9	12	5	12	s.	Geo. R. Schauber.

TABLE 1.—*Climatological data for September, 1909. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New York—Cont'd.																				
Bedford	Westchester	450	11																	Dr. L. Rosenburg.
Binghamton	Broome	875	18	59.6	− 0.4	88	14	34	29	40	1.81	− 0.96	0.79	0.0	7	9	7	14	s.	U. S. Weather Bureau.
Bouckville	Madison	1,350	12	58.1	− 1.5	85	14	34	29	36	2.79	− 0.19	0.94	0.0	8	9	11	10	nw	L. W. Griswold.
Boyds Corners	Putnam	560	27								4.31	− 0.27		0.0						Thomas Manning.
Carmel	Putnam	500	17	60.5	− 2.8	80	14	35	29	33	4.40	− 0.39	1.44	0.0	10	12	5	13	se.	Thomas Manning.
Chatham	Columbia	470	8	60.9	.....	85	14	34	29	38	3.30	.....	1.43	0.0	11	13	10	7	s.	Morton R. Tank.
Cooperstown	Otsego	1,250	55	57.0	− 1.3	78	14†	32	29	30	2.98	− 0.44	1.07	0.0	8	13	13	4	s.	G. Pomeroy Keese.
Corinth	Saratoga	542	7								2.82		1.30	0.0	5					A. M. Hollister.
Cortland	Cortland	1 129	47	59.4	+ 1.5	85	15	33	29	37	3.45	+ 0.03	1.21	0.0	8	19	5	6	nw.	F. G. Baker.
Cutchogue	Suffolk	32	32	63.8	− 1.9	81	23	46	29	29	4.66	+ 0.57	2.01	0.0	8	11	16	3	ne.	Wm. A. Fleet.
De Ruyter	Madison	1,300	6	59.4	.....	92	14	32	8†	45	3.26	.....	1.25	0.0	7	18	2	10	s.	B. D. Crandall.
Easton	Washington		19								4.61	+ 0.85	2.47	0.0	6					H. Taber.
Elmira	Chemung	863	27	62.7	− 0.1	95	14	33	29	44	2.09	− 0.73	1.23	0.0	4	8	17	5	w.	Gerity Bros.
Fort Hunter	Montgomery	280									2.00	.....	1.30	0.0	4	13	6	11	w.	C. E. Wing.
Fort Plain	Montgomery	316	5	61.2	.....	85	14	36	29	40	2.80	.....	1.10	0.0	9	16	11	3	w.	Abram Devendorf.
Glens Falls	Warren	340	15	59.8	− 0.4	85	14	32	29	37	3.47	− 0.15	1.57	0.0	8	12	6	12	w.	Prof. C. L. Williams.
Gloversville	Fulton	850	17	57.3	− 1.8	83	14	31	29	34	3.02	− 0.55	0.98	0.0	8	15	10	5	w.	W. L. McLean.
Greenfield Center	Saratoga	314	11	59.5	− 2.3	81	14	33	29	34	3.78	− 0.60	1.43	0.0	7	15	10	5	nw.	S E. Darrow.
Greenwich	Washington	425	12	62.6	+ 1.4	89	14	38	19	39	2.64	− 1.27	1.45	0.0	12	11	17	2	w.	I. V. H. Gill.
Griffin Corners	Delaware	2,260	9	56.6	.....	87	14	27	29	42	2.54	.....	0.88	0.0	8	16	5	9	w.	Sylvenus Kelly.
Hancock	Delaware										1.82			0.0	5					Daniel B. Van Eaten.
Haskinville	Steuben		9								2.71	− 0.01	0.98	0.0						W. G. Collins.
Hoosick Falls	Rensselaer	410									4.10		1.40	0.0	10	16	7	7	n.	Sanford L. Cluett
Indian Lake	Hamilton	1,705	10	55.2	− 2.0	83	14	25	27	45	2.60	− 1.72	0.75	0.0	7	16	3	11	w.	Lester Severie.
Jeffersonville	Sullivan	1,240	6	59.4	.....	89	14	30	29	48	2.53	.....	0.95	0.0	5	16	7	7	w.	Chas. Wilfert, Jr.
Lake Pleasant	Hamilton																			Willet Lawrence.
Liberty	Sullivan	2,300	23	57.8	+ 0.4	82	14	38	27†	30	2.94	− 0.78	1.00	0.0	5	15	7	8	nw.	Dr. H. M. King.
Little Falls	Herkimer	924	11	59.6	− 0.5	80	14†	38	26†	32	2.21	− 1.18	0.79	0.0	7	20	8	2	w.	O. J. Demster.
Mohonk Lake	Ulster	1,245	13	60.2	− 0.8	79	8	41	29	29	5.64	+ 0.62	2.00	0.0	9	17	5	8	sw.	A. K. Smiley.
Morehouseville	Hamilton	1,697	1	55.2	.....	85	14	27	29	43	3.48	.....	0.96	0.0	8	21	1	8	w.	Theodore C. Remonda.
Mount Hope	Westchester	200	12	62.3	− 1.9	84	14	35	29	41	2.77	− 1.17	0.60	0.0	9	7	12	11	.....	Wm. A. Cornelius.
Newark Valley	Tioga	825	1[c]								3.08	− 0.06	1.92	0.0	7	20	6	4	.....	M. D. Clinton.
New Berlin	Chenango		2								2.66		0.84	0.0	11	9	10	11	sw.	Roger Greene.
New Lisbon	Otsego	1,234	19	55.4	− 1.8	86	14	26	29	44	2.61	− 1.11	0.70	0.0	8	14	6	10	s.	G. A. Yates.
New York City	New York	314	84	65.6	− 0.9	79	3	48	29	23	2.66	− 0.93	0.83	0.0	7	10	9	11	nw.	U. S. Weather Bureau.
North Creek	Warren	1,002	1	57.0	.....	82	14	30	29	36	1.97	.....	0.98	0.0	7	21	3	6	nw.	W. G. Kenwell.
Northville	Fulton	742	7								2.13	.....	0.77	0.0	5	15	2	13	nw.	P. C. Pickard.
Norwich	Chenango	1,015	3	59.4[b]	.....	85[b]	15	32[b]	29	36[b]	2.14	.....	1.00	0.0	5	19	3	8	.....	H. S. Hopkins.
Oneonta	Otsego	1,112	15	59.8	− 1.7	92	14	32	29	38	1.98	− 1.52	0.75	0.0	6	19	3	8	nw.	H. W. Lee.
Oxford	Chenango	916	44	59.4	+ 0.7	84	14	34	29	34	3.03	− 0.57	1.50	0.0	7					John P. Davis.
Port Jervis	Orange	470	25	64.8	+ 1.9	89	14	37	29	47	2.83	− 1.00	0.85	0.0	5	13	7	10	ne.	Prof. John M. Dolph.
Salisbury	Herkimer	1,526	12	57.3	− 2.0	84	13	30	29	37	3.79	− 0.15	0.97	0.0	9	11	16	3	w.	Joseph Ryan.
Salisbury Mills	Orange	314	10	61.1	− 2.2	86	14	37	29	37	5.12	+ 0.57	1.90	0.0	6	20	2	8	w.	H. P. Ramsdell.
Scarsdale	Westchester	200	5																	C. H. Wilmarth.
Setauket	Suffolk	40	24	63.6	− 1.2	80	23	51	3†	25	3.96	+ 0.35	1.15	0.0	10	13	6	11	n.	Selah B. Strong.
Sherburne	Chenango		2								2.23		0.88	0.0	8					E. B. Collins.
Southampton	Suffolk	36	8	63.0	.....	76	3†	45	29	27	2.82	.....	1.16	0.0	10	11	15	4	ne.	W. L. Jagger.
Southeast Reservoir	Putnam	310	14								4.41									Thomas Manning.
Spier Falls	Saratoga	400	8	58.8	.....	84	14	31	6	40	3.12	.....	1.15	0.0	6	16	7	7	sw.	W. F. Anderson.
Trenton Falls	Oneida	751	6								3.16	.....	1.14	0.0	8	10	4	16	e.	C. W. Young.
Tribeshill	Montgomery	268									3.50	.....	1.30	0.0	7	18	2	10	w.	R. S. Marshall.
Utica	Oneida	537	4								2.13	− 1.44	0.63	0.0	6					W. E. Young.
Wading River	Suffolk	112	3	62.2		80	23	43	30	35	4.29		1.03	0.0	11	20	3	7	sw.	H. B. Fullerton.
Wappingers Falls	Dutchess	110	19	61.6	− 1.7	80	14	39	29	28	4.27	+ 0.27	1.16	0.0	9	13	10	7	n.	H. C. Townsend.
Warwick	Orange	538	9								3.20	− 0.93	1.04	0.0	7					John W. Sly.
Waverly	Tioga	824	27	60.2	− 1.2	91	14	31	6	48	2.24	− 0.74	1.00	0.0	7	7	15	8	nw.	Hon. J. F. Shoemaker.
West Berne	Albany	936	12	58.6	− 2.2	85	14	29	29	44	2.68	− 0.34	1.12	0.0	7	7	9	14	e.	W. J. Haverly.
West Point	Orange	167	60	61.4	− 3.4	82	15	28	29	43	2.57	− 1.17	1.00	0.0	3	12	3	15	w.	Maj. Chas. M. Gandy.
Windham	Greene	1,520	10	56.4	− 3.2	83	14	29	29	35	2.68	− 0.69	1.34	0.0	6	10	15	5	sw.	A. R. Mott.
Pennsylvania.																				
Altoona	Blair	1,181	21	60.3	− 2.7	88	23	35	29	40	2.47	− 0.29	1.78	0.0	5					Dr. C. B. Dudley.
Bellefonte	Center	826	8	64.5	− 0.7	93	14	32	24	51	2.90	− 0.12	1.87	0.0	5	19	7	4	.....	Fred Kurtz.
Center Hall	Center	1,272	10	62.2	− 0.8	89	14	35	29	40	2.46	− 0.37	1.65	0.0	3	15	8	7	.....	S. W. Smith.
Clearfield	Clearfield	1,107	1																	Raymond C. Ogden.
Coatesville	Chester	380	21	65.6	− 0.6	88	4	37	29	38	2.59	− 1.98	0.97	0.0	7	18	8	4	.....	W. T. Gordon.
Drifton	Luzerne	1,633	11	56.9	− 3.9	84	14	32	29	36	3.93	+ 0.03	2.05	0.0	7	18	10	2	w.	Eckley B. Coxe, Jr.
Dushore	Sullivan	1,590	11	61.0[b]	+ 1.6	86[b]	14	32[b]	21†	38[b]	2.18	− 0.30	1.02	0.0	3	14[b]	7[b]	7[b]	sw.	Dr. J. D. Benjamin.
Easton	Northampton	325	26	63.6	− 1.6	80	3	38	29	34	3.07	− 0.77	0.97	0.0	7	18	9	3	.....	J. W Colliton.
Emporium	Cameron	1,050	22	59.4	− 2.8	88	14	33	29	40	1.98	− 1.37	0.69	0.0	6	18	7	5	w.	T. B. Lloyd.
Ephrata	Lancaster	384	9	64.8	− 1.8	88	8	35	29	42	4.64	+ 1.17	2.47	0.0	4	19	5	6	s.	W. L. Frantz.
Everett	Bedford	1,080	11	61.6	− 1.7	84	14†	35	29	41	1.98	− 0.73	0.78	0.0	5	11	16	3	s.	B. L. Steckman.
George School	Bucks		2	63.6[b]		84[b]	23	35[b]	29	39[b]	2.78		1.18	0.0	9	19	3	6	.....	Prof. A. C. Smedley.
Gettysburg	Adams	600	35	64.5	+ 0.2	85	8†	37	29	40	4.90	+ 1.73	2.76	0.0	6	13	11	6	s.	Col. E. B. Cope.
Gordon	Schuylkill	804	5	61.4	− 1.3	87	14	29	29	47	2.55	− 2.37	1.33	0.0	5	20	6	4	se.	Capt. J. G. Johnson.
Hamburg	Berks	380	13	65.2	− 1.0	86	3†	35	29	41	3.43	− 0.81	2.40	0.0	3	21	2	7	se.	W. J. Kalbach.
Hanover	York	600	4	66.5	.....	87	14	40	29	39	1.85	.....	0.89	0.0	5	15	14	1	nw.	Dr A. C. Wentz.
Harrisburg	Dauphin	361	21	65.2	+ 0.3	82	8	44	29	28	2.62	− 0.23	1.52	0.0	5	15	5	10	n.	U. S. Weather Bureau.
Huntingdon	Huntingdon	650	21	63.2	− 1.3	87	14	31	28	46	0.95	− 2.23	0.46	0.0	4	13	11	6	w.	Prof. W. J. Swigart.
Hyndman	Bedford	977	2	62.2	.....	89	23	31	28	47	1.10	.....	0.39	0.0	6	13	9	8	n.	H. C. Mauk.
Kennett Square	Chester	275	19	64.2	− 1.8	79	3†	39	29	39	3.03	− 1.60	1.41	0.0	6	13	15	2	s.	C. C. Hadley.
Lawrenceville	Tioga	1,006	11	58.8[d]	− 2.8	96[f]	14	29[e]	29	56[e]	2.88	+ 0.34	1.36	0.0	5	13[e]	8[e]	4[e]	.....	C. P. Darling.
Lebanon	Lebanon	458	22	65.6	+ 0.1	88	7	36	29	40	1.50	− 1.54	0.80	0.0	5	14	11	5	sw.	G. W. Hayes, C. E.
Le Roy	Bradford	1,400	21	60.6	− 1.5	87	14	39	29	34	2.17	− 0.88	1.16	0.0	6	14	6	10	sw.	G. W. T. Warburton.
Lewisburg	Union	450	38	64.2	+ 1.1	87	14	34	29	43	2.12	− 1.33	1.16	0.0	5	17	5	8	w.	Prof. W. G. Owens.
Lock Haven	Clinton	560	21	64.1	− 0.8	91	14	35	28†	43	2.41	− 1.13	1.17	0.0	7	7	19	4	w.	Prof J. A. Robb.
Marion	Franklin	640	5	64.9	− 0.7	87	19†	36	29	40	1.12	− 1.23	0.94	0.0	2	21	6	3	.....	Hon. C. B. Hege.
Mauch Chunk	Carbon	634	20	63.6	− 0.8	89	14	35	29	46	4.41	+ 0.39	1.51	0.0	8	17	3	10	w.	F. C. Wintermute.
Mifflintown	Juniata	445	5	62.6	− 2.0	83	8	32	29	42	1.70	− 1.32	1.40	0.0	3	20	1	9	se.	Wellington Smith.
Milford	Pike	455	6	60.4	− 2.1	89	14	32	29	48	3.45	− 0.96	1.03	0.0	8	16	7	7	se.	Mrs. Alla Doughty.
Montrose	Susquehanna	1,658	5	59.4	− 2.2	92	14	31	6†	46	1.58	− 1.86	0.86	0.0	4					J. R. Beebe.
Mountain House	Fulton	1,950	.....	63.5	.....	83	14†	40	28	32	1.37	.....	0.54	0.0	4	19	7	4	e.	T. F. Sloan.
New Germantown	Perry	873	5	61.6	− 3.6	83	14	36	30	39	2.44	− 1.25	1.20	0.0	4	17	4	9	w.	Ed. C. Johnston.
Philadelphia(1)	Philadelphia	117	38	67.2	− 0.2	81	8	52	27	23	3.55	+ 0.17	1.59	0.0	8	11	10	9	nw.	U. S. Weather Bureau.
Philadelphia(2)	Philadelphia	120	18	67.2	− 1.8	83	1	51	27	26	3.84	+ 0.07	1.85	0.0	8	13	9	8	nw.	John Comly.
Philadelphia(3)	Philadelphia	90	5	65.8	.....	84	3	40	6†	38	3.65	.....	1.69	0.0	9	13	7	10	sw.	A. C. Davis.
Pocono Lake	Monroe	1,662	7	58.3[a]	− 0.4	83[a]	14	29[a]	29	43[a]	3.95	− 1.64	1.27	0.0	5	15[a]	4[a]	10[a]	w.	Pocono Lake Ice Co.
Reading	Berks	280	36	65.8	+ 0.1	85	8	37	29	37	3.08	− 0.31	1.56	0.0	6	..	....	..	.. ..	Franklin Yager.

TABLE 1.—*Climatological data for September, 1909. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Pennsylvania—Cont'd.																				
Scranton	Lackawanna	805	9	62.2	0.0	91	14	37	29	36	1.80	− 1.06	0.77	0.0	6	11	6	13	ne.	U. S. Weather Bureau.
Selinsgrove	Snyder	455	21	62.4	− 2.4	87	15†	34	29	47	1.89	− 1.57	0.90	0.0	6	0	26	4	nw.	J. M. Boyer, C. E.
State College	Center	1,191	21	60.8	− 2.1	87	14	39	25†	33	2.89	+ 0.06	2.25	0.0	5	.....	.....	.....	nw.	Prof. Wm. Frear.
Towanda	Bradford	754	14	61.6	− 1.0	89	14	32	29	45	1.81	− 1.12	1.04	0.0	4	21	5	4	se.	Hiram E. Bull, C. E.
Wellsboro	Tioga	1,327	32	60.0	+ 0.3	92	14	29	28†	49	2.64	0.00	1.10	0.0	6	14	14	2	sw.	O. L. White.
West Chester	Chester	455	55	65.4	+ 0.2	82	3†	42	29	31	3.02	− 1.33	1.34	0.0	11	16	6	8	se.	J. C. Green, D. D. S.
Wilkes-Barre	Luzerne	575	24	63.4	+ 0.1	92	14	37	6†	41	1.84	− 1.22	0.72	0.0	3	8	13	9	.....	A. W. Betterly.
Williamsport	Lycoming	530	19	63.8	− 0.2	85	11†	37	29	36	1.84	− 1.37	1.16	0.0	4	21	6	3	s.	Henry H. Guise.
New Jersey.																				
Asbury Park	Monmouth	22	21	65.0	− 2.2	80	1	44	29	25	3.02	− 0.33	1.56	0.0	7	15	7	8	e.	B. H. Obert.
Atlantic City	Atlantic	16	36	66.0	− 1.6	83	5	46	29	25	3.61	+ 0.56	1.51	0.0	5	8	7	15	s.	U. S. Weather Bureau.
Bayonne	Hudson	50	19	64.9	− 3.6	81	3†	44	29	30	2.92	− 0.67	0.84	0.0	8	13	6	11	se.	J. H. Eadie.
Belvidere	Warren	289	19	62.8	− 3.4	86	14	35	29	41	3.20	− 0.67	0.96	0.0	9	13	7	10	.....	S. J. Hixson.
Bergen Point	Hudson	37	12	65.2	− 1.7	82	14	42	29	30	3.19	− 1.25	1.05	0.0	8	12	9	9	se.	Dr. W. H. Mitchell.
Boonton	Morris	413	19	.....	.....	.....	.....	.....	.....	.....	3.44	− 1.44	0.99	0.0	9	.....	.....	.....	.....	F. G. McIntosh.
Bridgeton	Cumberland	30	34	66.5	− 2.3	87	1	40	29	39	4.01	+ 0.45	1.92	0.0	7	14	9	7	ne.	H. A. Jorden.
Burlington	Burlington	12	25	.....	.....	.....	.....	.....	.....	.....	3.07	− 0.77	1.44	0.0	8	.....	.....	.....	nw.	D. S. B. McCoy.
Canton	Salem	24	15	.....	.....	.....	.....	.....	.....	.....	3.97	+ 0.22	1.60	0.0	8	12	8	10	.....	J. H. Maskell.
Cape May City	Cape May	17	25	65.8	− 3.2	80	1†	49	29	24	2.62	− 0.38	1.69	0.0	7	7	18	5	.....	U. S. Weather Bureau.
Cape May C. H.	Cape May	19	22	66.2	− 1.6	83	23	45	29	27	2.98	− 0.05	1.79	0.0	6	7	14	9	ne.	L. T. Garretson.
Charlotteburg	Passaic	719	17	60.2	− 2.2	82	14	31	29	46	2.88	− 2.18	0.90	0.0	8	10	12	8	se.	G. S. Briggs.
Chatham	Morris	234	7	.....	.....	.....	.....	.....	.....	.....	3.27	.....	0.88	0.0	8	.....	.....	.....	w.	M. A. Butler.
Clayton	Gloucester	126	18	65.5	− 2.1	85	8	39	29	38	2.84	− 0.97	1.24	0.0	6	10	12	8	nw.	W. T. Farley.
College Farm	Middlesex	100	14	64.8	− 1.5	84	14	40	29	34	3.73	− 0.31	1.44	0.0	8	10	10	10	ne.	G. B. Thrasher.
Culver's Lake	Sussex	848	8	.....	.....	.....	.....	.....	.....	.....	4.16	.....	1.51	0.0	10	11	11	8	se.	B. E. Riker.
Dover	Morris	575	25	60.0	− 2.7	80	3†	34	29	41	3.31	− 1.22	0.83	0.0	9	8	11	11	.....	W. C. Harris.
Elizabeth	Union	33	30	65.4	− 1.6	85	3	43	29	35	2.08	− 2.05	0.72	0.0	7	11	10	9	sw.	W. M. Oliver.
Englewood	Bergen	135	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. C. Tucker.
Flemington	Hunterdon	187	21	64.4	− 2.4	86	14	38	29	42	2.47	− 1.96	1.15	0.0	10	11	9	10	n.	H. E. Deats.
Freehold	Monmouth	187	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. T. Cooper.
Friesburg	Salem	100	18	65.7	− 2.1	85	1†	36	6	41	3.72	− 0.02	1.60	0.0	8	10	10	10	s.	H. C. Perry.
Haddonfield	Camden	75	1	65.8	− 1.7	84	1†	38	29	38	2.68	− 1.34	1.04	0.0	8	8	12	10	nw.	C. F. Richardson.
Hammonton	Atlantic	80	12	.....	.....	.....	.....	.....	.....	.....	3.73	.....	1.58	0.0	7	.....	.....	.....	.....	Orville Bassett.
Hightstown	Mercer	85	18	64.6	− 2.8	85	23	37	29	39	3.28	− 0.32	1.25	0.0	8	14	8	8	nw.	Ernst Wenger.
Imlaystown	Monmouth	106	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. F. C. Price
Indian Mills	Burlington	76	9	64.5	− 1.9	87	3	35	29	46	3.20	− 1.47	1.32	0.0	6	10	13	7	se.	James Armstrong.
Jersey City	Hudson	15	4	66.7	.....	85	3	46	29	33	2.98	.....	0.91	0.0	7	11	10	9	se.	S. K. Pearson, jr.
Lakewood	Ocean	54	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. R. Major.
Lambertville	Hunterdon	95	23	64.2	− 1.9	83	14†	38	29	37	2.79	− 1.61	1.09	0.0	9	10	12	8	e.	W. R. Bowne.
Layton	Sussex	550	10	60.3	− 2.5	87	14	30	29	49	3.49	− 0.73	1.25	0.0	8	11	9	10	sw.	W. C. Hursh.
Little Falls	Passaic	175	7	.....	.....	.....	.....	.....	.....	.....	3.77	.....	0.93	0.0	8	.....	.....	.....	w.	F. Fearns.
Long Branch	Monmouth	30	1	66.2	.....	80	1†	41	29	26	3.11	.....	1.35	0.0	5	10	11	9	sw.	B. B. Bobbitt.
Mahwah	Bergen	312	7	.....	.....	.....	.....	.....	.....	.....	3.60	.....	0.96	0.0	8	.....	.....	.....	se.	M. F. Brooks.
Moorestown	Burlington	71	47	65.6	− 0.2	86	23	40	29	34	2.80	− 1.02	1.04	0.0	9	14	9	7	n.	J. C. Beans.
Newark	Essex	140	65	65.4	− 1.1	84	3†	46	29	36	2.16	− 1.72	0.72	0.0	7	10	9	11	nw.	Prof. Wm. Wiener.
New Brunswick	Middlesex	61	56	64.8	− 1.2	85	14	41	29	38	3.67	− 0.19	1.40	0.0	7	10	10	10	e.	W. T. Woerner.
Newton	Sussex	678	30	62.8	− 0.7	88	14	34	29	39	2.84	− 0.89	1.04	0.0	8	10	10	10	s.	B. H. Kienbaum.
Northfield	Atlantic	.....	1	.....	.....	.....	.....	.....	.....	.....	4.09	.....	1.95	0.0	6	.....	.....	.....	.....	W. L. Flick.
Oceanic	Monmouth	16	23	65.5	− 1.9	80	3†	44	29	31	3.73	− 0.53	1.22	0.0	8	11	9	10	se.	Prof. C. E. Dietz.
Paterson	Passaic	110	39	64.1	− 2.2	84	14	41	29	35	3.18	− 1.30	0.80	0.0	9	10	10	10	nw.	H. A. Probert.
Phillipsburg	Warren	196	7	64.5	− 0.7	89	14	38	29	40	3.03	− 0.69	1.09	0.0	9	12	7	11	se.	D. W. Smith.
Plainfield	Union	100	22	64.2	− 1.6	86	14	37	29	40	3.50	− 1.53	1.24	0.0	9	11	11	8	ne.	John Neagle.
Pleasantville	Atlantic	26	11	.....	.....	.....	.....	.....	.....	.....	4.10	+ 0.30	1.85	0.0	7	.....	.....	.....	.....	L. Van Gilder.
Pompton Plains	Morris	195	7	.....	.....	.....	.....	.....	.....	.....	4.50	.....	1.07	0.0	8	.....	.....	.....	n.	M. S. Taylor.
Port Norris	Cumberland	8	1	.....	.....	.....	.....	.....	.....	.....	3.09	.....	1.79	0.0	4	.....	.....	.....	.....	J. H. Barraclough.
Rancocas	Burlington	68	46	.....	.....	.....	.....	.....	.....	.....	3.23	− 0.74	1.25	0.0	8	11	7	12	nw.	Spencer Haines.
Rivervale	Bergen	70	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. S. M. Holdrum.
Runyon	Middlesex	18	3	.....	.....	.....	.....	.....	.....	.....	2.81	.....	1.03	0.0	7	.....	.....	.....	.....	J. H. Cottrell.
Somerville	Somerset	76	30	65.2	− 1.2	86	14†	36	29	42	3.22	− 0.70	1.08	0.0	8	10	11	9	se.	P. Hardcastle.
South Orange	Essex	200	40	62.7	− 1.4	80	14	41	29	29	2.63	− 1.50	0.90	0.0	7	13	10	7	ne.	Dr. W. J. Chandler
Sussex	Sussex	442	19	62.4	− 1.7	85	14	36	29	39	3.49	− 0.44	1.17	0.0	8	9	12	9	w.	Prof. W. H. Seeley.
Trenton	Mercer	60	40	65.4	− 3.0	82	14†	44	29	28	3.54	− 0.38	1.61	0.0	7	10	10	10	sw.	E. R. Cook.
Tuckerton	Ocean	23	16	64.8	− 1.9	85	1†	36	29	40	4.58	+ 1.44	1.87	0.0	7	10	10	10	sw.	F. R. Austin.
Vineland	Cumberland	118	42	65.4	− 1.6	84	1†	39	6†	40	3.84	0.00	1.92	0.0	8	11	8	11	nw.	Alfred Chalmers.
Woodbine	Cape May	43	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. R. D. Maltby.
West Virginia.																				
Bayard[a]	Grant	2 500	6	58.3	.....	81	12†	32	25†	41	4.69	.....	1.47	0.0	7	12	13	4	nw.	Solomon Clark.
Burlington	Mineral	875	13	63.0	− 2.0	90	23	34	28†	44	3.23	+ 0.42	1.60	0.0	3	12	16	2	nw.	J. W. Vandiver.
Franklin	Pendleton	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. A. Martin.
Lost City	Hardy	.....	3	62.8	.....	84	23	36	29	36	1.92	.....	1.14	0.0	4	17	9	4	w.	B. D. Hinegardner.
Martinsburg	Berkeley	435	18	64.2	− 2.3	84	23	40	29	35	3.65	+ 1.07	2.20	0.0	5	19	9	2	nw.	G. W. Van Metre, C. E.
Moorefield	Hardy	900	13	64.4	− 1.9	92	23	31	28	48	1.23	− 1.40	0.61	0.0	3	16	18	2	se.	John C. Fisher.
Romney	Hampshire	824	13	63.8[g]	− 2.6[g]	88[g]	23	34[f]	29	.....	2.33	+ 0.04	.....	0.0	.....	.....	.....	.....	w.	Jno. C. Linthicum.
Upper Tract[a]	Pendleton	1,230	11	63.4	− 3.1	89	23	30	28	45	1.74	− 0.49	0.70	0.0	4	9	14	6	w.	J. M. Mallow.
Maryland.																				
Annapolis	Anne Arundel	45	31	68.6	− 1.1	86	10	46	29	27	5.50	+ 1.35	2.45	0.0	4	19	7	4	nw.	W. M. Abbott.
Bachman's Valley	Carroll	860	16	64.0	− 1.0	82	8	37	29	42	2.66	− 1.25	1.54	0.0	4	24	5	1	sw.	J. M. Myers.
Baltimore	Baltimore	115	39	67.7	− 0.9	82	17	47	29	27	3.97	+ 0.12	2.35	0.0	5	12	8	10	n.	U. S. Weather Bureau.
Cambridge	Dorchester	25	11	69.2	− 1.6	92	23	43	29	35	2.90	− 0.66	1.40	0.0	7	11	11	8	ne.	T. E. Keenan.
Cheltenham	Prince Georges	230	9	66.0	.....	84	23	38	29	34	3.84	.....	2.45	0.0	5	10	9	11	nw.	J. E. Burbank.
Chester	Queen Annes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. M. Kelly.
Chestertown	Kent	80	24	66.5	− 1.2	85	23	44	29	28	3.11	−0.66	1.58	0.0	4	23	4	3	sw.	Hon. M. de K. Smith.
Chewsville	Washington	530	12	63.3	− 3.2	83	23	33	28	39	1.18	− 1.22	0.75	0.0	4	15	14	1	nw.	D. Paul Oswald.
Clear Spring	Washington	650	12	64.8	− 1.1	82	22	39	29	34	1.53	− 0.83	0.87	0.0	4	15	14	1	e.	W. W. Frantz.
Coleman	Kent	80	11	68.0	− 1.2	88	2†	43	29	35	3.52	− 0.48	1.72	0.0	6	18	3	9	sw.	Jas. H. Harris.
College Park	Prince Georges	170	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. H. J. Patterson.
Cumberland	Allegany	700	35	.....	.....	.....	.....	.....	.....	.....	1.31	.....	0.40	0.0	5	25	4	1	sw.	J. W. Frantz.
Darlington	Harford	300	17	65.0	− 1.3	81	23	46	29	34	4.21	+ 0.13	3.05	0.0	5	13	12	5	e.	Prof. A. F. Galbreath
Denton	Caroline	42	14	66.2	− 2.5	85	1	37	29	38	5.27	+ 1.38	1.96	0.0	7	16	6	8	sw.	H. B. Mason.
Easton	Talbot	35	18	65.6	− 3.1	84	23	41	29	29	3.66	+ 0.43	1.96	0.0	5	20	6	4	n.	Henry Shreve.
Emmitsburg	Frederick	720	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jno. H. Eckenrode.
Fallston	Harford	450	36	65.2	− 0.5	83	23	43	29	30	4.16	− 0.30	2.88	0.0	5	3	23	4	se.	J. H. Curtiss.
Frederick	Frederick	275	32	65.5	− 1.6	83	14†	29	33	33	4.74	+ 1.49	2.06	0.0	5	17	8	5	se.	Henry Trail
Frostburg	Allegany	1,929	8	62.2	.....	83	14†	39	6†	36	1.57	.....	0.45	0.0	7	12	14	4	.....	L. B. Abbott.
Great Falls	Montgomery	200	18	64.9	− 3.2	86	22	37	29	37	4.08	+ 0.84	1.33	0.0	7	16	9	5	se.	J. W. Bissett.
Green Spring Furnace	Washington	450	17	65.2	− 1.9	86	23	37	29	33	1.50	− 0.99	0.72	0.0	4	20	6	4	e.	E. G. Kinsell.
Keedysville	Washington	400	5	66.0	.....	86	23	36	28	41	2.32	.....	0.95	0.0	5	20	6	4	•	J. A. Miller.

TABLE 1.—*Climatological data for September, 1909. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Maryland—Cont'd.																				
Laurel	Prince George	150	15	64.6	− 3.7	86	23	35	29	38	3.35	− 0.36	1.45	0.0	5	13	13	4	.....	Dr. T. M. Baldwin.
Monrovia	Frederick	630	22	65.2	− 1.3	84	23	40	29	32	3.89	+ 0.37	1.79	0.0	5	18	6	6	s.	J. H. Lawson.
Ocean City	Worcester	10																		J. Alan Massey.
Pocomoke City	Worcester	37	16	67.4	− 2.9	84	1†	45	29	28	2.67	− 0.38	1.57	0.0	5	20	5	5	sw.	R. M. Stevenson.
Porto Bello	St. Marys	38	4	69.4	.....	85	1	45	29	29	2.20	.....	0.79	0.0	5	...	...	...	se.	Alpheus Hyatt.
Princess Anne	Somerset	17	16	65.6	− 2.6	85	23	38	29	33	3.48	+ 0.54	1.65	0.0	6	4	20	6	ne.	Jas. R. Stewart.
Rockville	Montgomrey	421	2	67.2	.....	79	11†	47	6	24	2.82	.....	1.32	0.0	4	11	4	3	.....	Dr. Geo. E. Lewis.
Salisbury	Wicomico	23	4	66.8	.....	87	23	38	28†	37	3.23	.....	1.43	0.0	10	11	17	2	sw.	W. E. Downing.
Sanatorium	Frederick	.....	1	64.1	.....	80	8†	43	28	28	1.69	.....	0.98	0.0	4	19	5	6	se.	Dr. W. M. Garrison.
Solomons	Calvert	20	18	68.7	− 3.0	84	1†	50	29	25	3.22	+ 0.44	2.10	0.0	6	4	10	16	se.	Dr. W. H. Marsh.
Sudbursville	Queen Annes	65	10	67.2	− 1.3	86	8	39	29	39	5.71	+ 1.23	2.95	0.0	8	15	6	9	ne.	Jas. E. Higman.
Takoma Park	Montgomery	320	11	63.4	− 3.8	81	24	42	29	33	3.59	− 0.46	2.23	0.0	6	8	15	7	.....	L. M. Mooers.
Taneytown	Carroll	450	10	64.1	.....	85	8	34	29	40	2.10	− 1.19	1.46	0.0	4	21	7	2	se.	R. A. Nusbaum.
Towson	Baltimore	475	1	65.6	.....	83	7	40	29	35	4.24	.....	2.65	0.0	6	23	3	4	se.	C. W. Treadwell.
Van Bibber	Harford	100	12																.....	H. A. Wroth.
Westernport	Allegany	1,000	15	64.2	− 1.6	87	14	35	28	44	2.00	− 0.42	0.73	0.0	5	...	...	...	.....	Prof O. H. Bruce.
Woodstock	Baltimore	392	35	65.2	− 0.5	80	7†	39	28	35	3.95	+ 0.29	1.61	0.0	6	19	6	5	nw.	Rev. A. J. Donlon.
District of Columbia.																				
Washington	District of Columbia	112	39	56.4	− 1.7	84	23†	42	29	31	3.42	− 0.17	2.18	0.0	6	8	12	10	n.	U. S. Weather Bureau.
Delaware.																				
Delaware City	New Castle	10	7	66.6	.....	82	1†	44	29	29	2.40	.....	1.25	0.0	3	20	6	4	s.	H. Morton Price.
Dover	Kent	40	21	66.8	− 1.0	86	5	39	29	36	3.55	− 0.41	1.71	0.0	4	11	13	6	se.	Thos. F. Dunn.
Milford	Kent	20	25	67.4	− 0.7	87	6	41	29	40	3.22	− 0.82	1.20	0.0	10	13	11	6	se.	C. J. Holzmueller.
Millsboro	Sussex	20	17	66.1	− 2.5	87	23	40	29	36	3.02	− 0.31	2.10	0.0	6	16	6	8	nw.	Rev. L. W. Wells.
Seaford	Sussex	40	16	65.6	− 2.8	84	5	40	29	30	2.51	− 0.67	1.07	0.0	9	20	5	5	se.	E. B. Brown.
Virginia.																				
Culpeper	Culpeper	450	....	65.6	.....	85	15	37	29	37	2.11	.....	1.30	0.0	4	5	21	4	s.	Col. H. C. Burrows.
Dale Enterprise	Rockingham	1,350	30	64.6	− 2.0	88	4†	36	6†	45	0.95	− 2.73	0.40	0.0	4	11	12	7	s.	Rev. L. J. Heatwole.
Doswell	Hanover	134	8	66.7		86	5	36	29	38	2.18		1.32	0.0	4	14	13	3	s.	R. F. & P. R. R.
Fredericksburg	Spottsylvania	100	20	67.1	− 2.2	87	11	38	29	38	2.20	− 1.19	0.97	0.0	5	10	15	5	se.	S. G. Howison.
Lincoln	Loudon	500	8	66.2	− 1.3	90	7†	35	29	43	3.64	+ 0.51	1.24	0.0	5	14	5	11	nw.	Dr. George Roberts.
Mt. Weather	Loudon	1,726	5	61.3	+ 4.1	76	23	40	28	23	2.58	− 2.42	1.18	0.0	6	14	9	7	nw.	U. S. Weather Bureau.
Nokesville (near)	Fauquier	350	5	66.1		86	11	40	29	34	3.34		1.77	0.0	3	14	7	9	.....	Andrew Low.
Quantico	Prince William	16	12	66.4	− 1.9	81	1†	41	28	30	4.10		1.80	0.0	3	24	0	6	nw.	R. F. & P. R. R.
Shenandoah	Page	937	8								2.14	− 0.37	1.09	0.0	6	22	3	5	sw.	N. & W. Ry.
Staunton	Augusta	1,380	17	64.6	− 3.4	86	15	38	28	38	3.10	− 0.36	1.90	0.0	8	...	...	...	.....	Western State Hospital.
Stephens City	Frederick	710	17	64.4	− 3.9	87	14†	37	25†	41	3.73	+ 0.43	0.95	0.0	5	27	2	1	se.	B. T. Argenbright.
Warsaw	Richmond	160	17	64.6	− 5.3	84	13	40	30	28	1.45	− 1.29	1.00	0.0	3	10	18	2	n.	C. H. Constable.
Woodstock	Shenandoah	927	13	65.4	− 2.2	89	23	38	29	42	2.48	− 0.22	1.37	0.0	5	19	9	2	w.	Miss A. G. Miley.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of fall not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§ § Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖ ‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 1, North Atlantic States.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Maine.																																	
Bar Harbor	Coast					.60					T.	.35						.20							.35	.30	1.85	1.50	.60	2.60			8.35
Cornish	Saco	.62			T.	.82					.12	.13				.01	T.	.29					T.	T.	.19		.41	1.12	1.73		.10		5.54
Danforth	Penobscot	.25	.30			.50						.60						.05							.30	.10	1.00	1.50	1.30	1.20			7.10
Debsconeag	do.	.88	.12			1.11	.04				.01	.32					.07	.08	.03				.01	.01	.02	.12	.30	1.58	2.66	2.91			10.27
Eastport	Coast	.23				.26						.22						.14	.01						1.11	.47	.68	1.12	.19	1.97			6.40
Fairfield	Kennebec	.50				.75																			.28		*	1.35		2.73			5.61
Farmington	do.	.60	.10			.90						.42						.03							.23	.12	.58	1.40	2.78	.58			7.74
Gardiner	do.	.05				.87					.04	.13						.54							.35	.03	.25	1.10	1.89	1.14			6.39
Greenville	do.	1.01			T.		1.20				.20	.30					.10	.01					T.	T.	.20	T.	1.00	1.40	3.87	.71	.12		10.12
Houlton	St. John	.03															T.								.01			*	*	5.80	.30		6.14
Lewiston	Androscoggin	.40				.93					.07	.34						.46						T.	.21	.01	.37	.73	2.24	.38			6.14
Madison	Kennebec	1.09				1.00						1.65					.03						.02			.25	*	2.43	2.44	1.10	.03		10.04
Millinocket	Penobscot	*	.71			*	1.30				*	.45			T.			.04							.03	.15	*	2.15	1.49	3.23	.15		9.70
North Bridgeton	Saco	.66				.60					*	.86						.38						.05	.16		.20	.75	2.32		.15		6.13
Orono	Penobscot	.21				1.10						.48					.02	.65							.27	.16	.65	2.06	.87	2.62			9.09
Oquossoc	Androscoggin																																
Patten	Penobscot	1.39	.15			1.75					T.	.26												.09	.12			2.35	1.00	2.60			9.71
Portland	Coast	.05			.11	.61					.18	.05				.02		.46						T.	.70	.01	.74	.25	1.50	T.			4.68
Rumford Falls	Androscoggin	1.04			.09	.65					.09	.30					.04								.37	.04	.76	1.20	2.45		.05		7.08
The Forks	Kennebec	.96				1.05					.50						.25								.40		*	*	4.25		.15		7.56
Van Buren	St. John																																
Winslow	Kennebec	.35				.88					.30							.30									.21		1.73	1.61	1.33			6.71
New Hampshire.																																	
Alstead Center	Connecticut	.23				.23					.18	.13						.36					T.	.12	.68	.12		.57	1.53				4.15
Benton	do.	1.05				.69	.06					.28					.11							.06	.89	.04	T.	*	1.69				4.87
Bethlehem	do.	.30				.99	.09					.40			T.		.06	.13							1.90		.50	.60	3.00				7.97
Brookline	Merrimac	.28				.84					.57							.36					T.	.03	.35		.40	.46	.75				4.04
Concord	do.	.06			.20	.27					.27	.31				T.	.02	.46					T.	T.	.41	.06	.64	.55	.90				4.15
Durham	do.	.09				.56					.02					.03		.35							.70	.08	.81	.79	.64	.27			4.34
Franklin	do.	.04				.33					.07	.12				T.		.21					T.	.01	.40	.11	.05	.96	1.22				3.52
Grafton	do.	.65			T.	.35					.01	.20					T.	.15					T.	.15	.47			.87	1.65				4.00
Hanover	Connecticut	.27				.08	.11				.08	.09			T.		.01						.01	.02	.56		.05	.86	1.31				3.45
Keene	do.	.10				.23					.47	.15			.02			.28					T.	.10	.83	.13		.43	1.38				4.12
Nashua	Merrimac	.26			.03	.61					.35	.18						.31						T.	.39	.03	.54	.25	.76				3.71
Newton	Merrimac	.33				.58					.55					T.		.30				T.	T.	.31	.92		.77	.10	1.02				4.58
Plymouth	do.	.84				.49					T.	.21					T.	.17						T.	.39	T.	T.	.87	.73		T.		3.70
West Ossipee	Saco																																
Vermont.																																	
Bloomfield	Connecticut	.47				.76						.76					.03	.17						.01	.76		.01	.25	1.94	.32	.09		5.57
Cavendish	do.	T.			T.	.69						.22			T.									.51	.37			1.13	1.58				4.45
Chelsea	do.	.30			.03	.10					.08						.08						T.		.68		T.	.71	1.20		.04		3.22
Jacksonville	do.				.15			T.				1.60				.10	.10						.35	.05	.80			1.10	1.20				5.45
Manchester	Hudson	.38			.15	.38					.28	.11						.26					T.	.48	.42			.43	1.71		T.		4.60
St. Johnsbury	Connecticut	.48				.40					.37						.02							T.	.35		.02	.53	1.36	.18	.02		3.73
Woodstock	do.	.65									.33													.32	.52				2.10				3.92
Massachusetts.																																	
Amherst	Connecticut	.08			.02	.20					.50	.08		T.		T.	.13	.50					.02	.02	.59	.02	.08	1.43	1.32				4.99
Ashland	Merrimac	.17				.21					*	1.14					.01	.13					.06	.81	.62		*	*	1.44				4.59
Bakers Bridge	do.	.66				.32					.25	.35						.16							.17	.80	.33	.23	.23	.90	.37			4.77
Bedford	do.																																
Blue Hill	Coast	.36				.14					.31	.34						.10						.15	.92	.06	.74	.43	.71	.16			4.42
Boston	do.	.52			T.	.11					.41	.50						.18					.01	.53	.97	.05	.86	.37	.64				5.15
Chestnut Hill	do.	.46				.21					1.08						.02	.23						.91	.78		.82	.62	.66				5.79
Clinton	Merrimac	.83				.62					*	.67						.19						*	*	.68	*	*	1.87				4.86
Concord	do.	.74			T.	.49					.27	.29						.17					T.	.16	.81	.20	.20	.27	1.19	T.			4.89
Fall River	Coast					.20					.30	.10												.05	.45		.50	.15	1.31				3.06
Fitchburg	Merrimac	.22				.63					.35	.41						.22					.03	.02	.25	.17	.20	.65	.96				4.11
Framingham	do.	.21				.20					*	.87					.02	.10						.06	1.57		*	.34	1.18				4.55
Haverhill	do.	.42				.60					.34	.36						.40				.01		.02	.51	.30	.23	.47	.50	.35			4.51
Hingham	Coast	.02				.10					*	.78						.02					.09	.31	1.05		.94	*	1.64				4.95
Hyannis	do.					.17					*	.08						.02						.03	.13	.52	1.11	.49	*	2.06			4.61
Jefferson	Merrimac	.21				.49					.67							.30						*	.65		*	*	1.81				4.13
Lake Cochituate	do.	.08				.20					*	.90						.21						.62	.70		*	.51	1.11				4.33
Lawrence	do.	.43			.02	.60					*	.46						.32					T.	T.	.93	.03		.30	.92				4.01
Leominster	do.	.31				.49					.41	.32				.01		.35					.03	.02	.29	.16	.20	.67	.86				4.12
Lowell	do.	.10				.44					.53							.26							1.16		.44	*	1.28				4.21
Middleboro	Coast					.24					*	.67						.07					T.	T.	.84		1.01	*	1.50				4.33
Monson	Connecticut																																
Nantucket	Coast					.15					T.	.02						T.					T.		1.43	.05	.80		.88	.32			3.71
New Bedford	do.																																
Norfolk	do.	.54				.19					.09	.65						.08						.34	.80	.31	.40	.52	.18	.47			4.57
Northampton	Connecticut				.36						.46	.16						.46							.44	.32		*	2.97	.15			5.32
Plymouth	Coast					.23						.44						.11							.60		*	1.59	1.61				4.58
Princeton	Merrimac	.06				.50					.48							.36							*	.50	*	*	1.56				3.46
Provincetown	Coast											.48						.07							.10	.10		1.90	1.47	.63			4.75
Rockport	Coast	.20				.30					.10	.22						.40						.08	.55	.20	.80	1.03	1.48	.90			6.21
Rutland	Connecticut	.22				.50			T.		*	.52			T.	.01		.17		T.			.03	.10	*	.44	*	.25	1.35				3.59
Salem	Coast																																
Somerset	Coast	T.				.34					*	.47						.18					.02	.71	.02		.62	*	1.12				3.48
Spot Pond	Coast	.31			.01	.18					.77						.06	.22					.02	.94	.77		.83	.37	.64				5.12
South Egremont	Housatonic	.06				.03					.73						.27						.15	.40	.18		.10	1.60	.12				3.64
Sterling	Merrimac	.16				.38					*	.41						.16						T.		.52	*	*	1.67				3.30
Taunton	Coast	T.			T.	.23					*	.31						.21					T.	T.	1.87	T.	*	*	2.28				4.90
Turners Falls	Connecticut	.12			T.	.20						.62		T.	T.			.29					.07	T.	1.11	.15		.22	2.48				5.26
Westboro	Merrimac	.40				.30						1.06						.07					*	*	*	1.26	*	*	1.65				4.74
Williamstown	Hudson	.15				.19					.62	.62						.20					.02	.65	.58			.40	1.44				4.27
Winchendon	Connecticut	.19				.36					.41	.38						.48						.03	.40	.18	.06	.48	1.12				4.09
Worcester	Coast	.31			.04	.61					.41	.28				T.		.12					T.	.16	.67		.24	.41	.82	T.			4.07
Rhode Island.																																	
Block Island	Coast	.04				.18					.40	.02						.02						T.	1.01	.01	.29	.74	.97				3.68
Bristol	do.	T.				.19					*	.44						.11					.01	*	1.63		*	.67	1.27				4.32
Kingston	do.					.38					.46	.31						.11						.15	1.97		.18	.20	.86				4.62
Narragansett Pier	do.	.05				.32					.66	.10						.30							.86	.03	.40	.32	.81				3.85
Pawtucket	do.	T.				.35					*	.39						.21					*	*	.85	.11	*	.38	1.10				3.39
Providence	do.	.01			T.	.09					.33	.23				T.		.21					.03	.51	.46	T.	.29	.29	.83				3.28
Connecticut.																																	
Bridgeport	Coast	.01				.52					.68	.12					T.	.29					.15	.02	.48	.19		.37	.66				3.49
Canton	Connecticut	.19				.28					.75					T.		.16				.05			1.18			*	1.35				3.96
Colchester	Coast	.35				.42					*	.62						.83						*	1.35	.15	*	*	2.17				5.89
Cream Hill	Housatonic					.11					.55							.33					.05		1.32	.12		1.40	.33				4.21
Danielson	Coast	.36				.27					.70							.23						*	2.63	.17	*	*	1.75				6.11
Falls Village	Housatonic	.03									.46						.10	.25					.05		1.26			.79	1.00				3.94
Farmington	Connecticut																																
Hartford	Connecticut	.13			T.	.23					.46	.06		T.		T.	T.	.35					.01	.10	.86		T.	.85	.78				3.83

TABLE 2.—*Daily precipitation for September, 1909. District No. 1*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Connecticut—Cont'd.																																	
Hawleyville	Housatonic					.54					.40	.20						.55							.92			.32	.81				3.74
Lake Konomoc	Coast					.32					.30		.15					.37						.40	1.30	.30		.35	1.85				5.34
New Haven	do	.15				.50					.78	T.		T.		T.		.29					.04	.02	.93	.01	T.	.72	.49				3.93
New London	do										.65	.40						.34						.30	.40	.31	.10	.35	2.19				5.04
North Grosvenordale	do	.15				.25					.25	.35						.22					.05	.38	1.25		.10	.15	1.25				4.40
Norwalk	do					.37					1.07							.24					.20		•	.50		•	1.14				3.52
Southington	do	.20				.30					.30	.30						.30					.10		.95				1.50				3.95
South Manchester	Connecticut	.09				.53				.23								.30							.72			•	2.00				3.87
Storrs	Coast	.21				.46					•	.90						.22							.88				2.65				5.32
Torrington	Housatonic	.05				.37					.62						.25	.01					.02	.07	.71	.51		.11	1.17	.01			3.91
Voluntown	Coast	.10				.21					.25	.35											T.	.05	.36	.07	T.		2.40				3.79
Wallingford	do	.91			.07	.38						.38						.88					.05	.09	.80		.03	1.37					4.96
Waterbury	Housatonic	.12				.46					.58	.02					T.	.93					•	.16	.85			.55	.84				4.51
West Simsbury	Connecticut	.17			T.	.68					•	.68				T.		.15					.13		.83			•	1.43				4.07
New York.																																	
Addison	Susquehanna	T.			.05	.03					1.19	T.						.88						.34	.28			.29	1.12		T.		3.20
Albany	Hudson	.34			.03	.13					.57							.03	.09				T.	T.	.28								2.88
Amsterdam	Mohawk																																
Athens	Hudson	.04			.02	T.					.64	.06			T.	T.	.02	.18					.04	.24	.30		T.	1.44				2.98
Ballston Lake	Hudson	.24			.07	.12					•	1.23		T.			.02	.03					T.	.02	.71				1.56		T.		4.00
Bedford	Coast																																
Binghamton	Susquehanna				.03	.11					.79							.18						.46	.18						.06		1.81
Bouckville	Susquehanna	.10				.43	.04				.94	.04						.25							.70						.29		2.79
Boyd's Corners	Hudson																																‡4.31
Carmel	do				•	.26					•	.98						.26					•	.27	1.19			•	1.44				4.40
Chatham	do	.38			T.	.06			.02		.36	.01					T.	.20					.01	.28	.44			.11	1.43				3.30
Cooperstown	Susquehanna	.20			.20	.05					1.07							.25						.58				.53			.10		2.98
Corinth	Hudson				.15						.55													.02	.80			1.30					2.82
Cortland	Susquehanna	.10	.03			.24					1.21	.02						.64							.89						.32		3.45
Cutchogue	Coast	.85				.17					.40	.07											T.	T.	.29	.50		.37	2.01				4.66
De Ruyter	Susquehanna	.20	.02		T.	.22					1.25	T.				•		.55						•	.70			•			.32		3.26
Easton	Hudson	.20			.42						.76												.06		•	.70	•	2.47					4.61
Elmira	Susquehanna					.04					1.23							.60													.22		2.09
Fort Hunter	Mohawk					.30					1.30														.20				.30				2.00
Fort Plain	do	.29			.04	.07					1.10	.16						.10							.42				.56		.06		2.80
Glens Falls	Hudson	.25			.05	.10					.15	.11		T.									T.	•	1.18		•	.06	1.57				3.47
Gloversville	Mohawk	.38			.20	.15					.98	.38						.06							.30				.57				3.02
Greenfield Center	Hudson	.20			.10	.35					.70							.05							.95				1.43				3.78
Greenwich	do	.02		.01		.15					.25	.15		T.			T.	.03					.02	T.	.49			.05	1.45	.01	.01		2.64
Griffin Corners	Delaware	.09			.04	.21					.35							.21	.28						.48			•	.88				2.54
Hancock	do																																1.82
Hankinville	Susquehanna					.26					.40							.17						.98	.15		•	.55			.20		2.71
Hoosick Falls	Hudson	.40	.04			.53	.03					.76							.28					T.	.35			.26	1.40	.05			4.10
Indian Lake	do				.05	.15						.15						.10							.70				.75		.10		2.00
Jeffersonville	Delaware	T.			T.	.11					.95					T.		.17					T.		.85			T.	.45		T.		2.53
Lake Pleasant	Hudson																																
Liberty	Delaware									.35	1.00							.40						.63				.56					2.94
Little Falls	Mohawk	T.			.35	.17					.68	.09						T.							.79				.02		.11		2.21
Mohonk Lake	Hudson									•	2.00	.30				.02	.10	.85				.05	.40	.82			•	1.10				5.64
Morehouseville	Mohawk	.32			.25	.96					.05							.25							.90				.55		.20		3.48
Mount Hope	Coast					.22					.35	.12							.35				.21	.12	.30			.60	.50				2.77
Newark Valley	Susquehanna	.05			.08	.15					1.92							.15							.60						.13		3.08
New Berlin	do	.21	.05			.16	.07				.16	.84						.22	.02						.59				.26		.08		2.66
New Lisbon	do	.35				.22					.70							.23	.02						.66				.37		.06		2.61
New York City	Coast					.12					.70							T.	.07				.39	T.	.55			.28	.55				2.66
North Creek	Hudson	.09				.14						.25						.03						.40				.98			.08		1.97
Northville	do				.13						.64													.49			.77	.10					2.13
Norwich	Susquehanna										1.00							.40							.64				.04		.06		2.14
Oneonta	do	.09				.10					.75							.13							.51				.40		T.		1.98
Oxford	do					.24					1.50	.12						.33						.67					.08		.09		3.03
Port Jervis	Delaware										.77							.43					.48		.85			.30					2.83
Salisbury	Mohawk	.18			.38	.42					.97	.18				.28									.75				.51		.12		3.79
Salisbury Mills	Hudson				.07						1.00						1.30	.15							1.90				.70				5.12
Searsdale	Coast																																
Setauket	do	.48				.26					.67	.02						.12					.02	T.	1.15		•	.52	.72				3.96
Sherbourne	Susquehanna				.20	.12					.33	.55				.31									.45				.14		.13		2.23
Southampton	Coast	.43				.16					.32	.20						.01						.01	.17	.14	T.	.22	1.16				2.82
Southeast Reservoir	Hudson																																
Spier Falls	Hudson	.27				.12					.28	.25													1.05			•	1.15				3.12
Trenton Falls	Mohawk	.31	.03			1.14	.08					.27						.32							.69				.32				3.16
Tribeshill	do	.10				.80					1.30							.10					.10	.40					.70				3.50
Utica	do	.06				.42					T.	.42						.12							.62				.48				2.13
Wading River	Coast	.10			.14						.42	.35							.04					.18	1.00	.22	.03	.78	1.03				4.29
Wappingers Falls	Hudson				.12	T.					.74	T.				.03	.46						.08	.49	1.16			.14	1.05				4.27
Warwick	do					.10					.52							.70					.08	.04	.72				1.04				3.20
Waverly	Susquehanna				.05	.06					1.00	.02						.08							.84						.19		2.24
West Berne	Mohawk	T.			.05	.02					.94	.07						.02							.46				1.12				2.68
West Point	Hudson											.59										T.			1.00			•	.98				2.57
Windham	Mohawk	.18				.23					.50							.20	.23										1.34				2.68
Pennsylvania.																																	
Altoona	Susquehanna				.13	.02					.48							.06					T.	1.78					T.			2.47
Ansonia	do					.12					1.06	.40						.14						.84							.18		2.74
Bellefonte	do				.08							.68						.24						1.87	T.						.03		2.90
Browers Lock	Schuylkill										.58							.29	.01				.05	.40	.25			.24	.16				1.98
Center Hall	Susquehanna	T.				T.					.55							.26						1.65									2.46
Clearfield	do																																
Coatesville	Coast										.97	.01				.02	.18	.42							.88			T.	.11				2.59
Doylestown	Schuylkill										.71						.15						.38	.42	.67			.73					3.06
Drifton	Susquehanna				.05	.05					1.20	.05				.08	.45								2.05								3.93
Dushore	do										.24						.92								1.02								2.18
Easton	Delaware					.50					.97						•	.27					.09	.21	.45			•	.58				3.07
Emporium	Susquehana				.18	.05			T.		.64					.25								.69						.17		1.98
Ephrata	Susquehanna										.94						1.05	2.47							.18								4.64
Everett	Juniata				.27	.06					.69						.78							T.	.18								1.98
Forks of Neshaminy	Delaware					.07					.90						.05						.05	.28	1.03			.14	.35				2.87
George School	do	T.				.01					1.18	.02											.04	.10	.95	.01		.01	.46				2.78
Gettysburg	Potomac	.05			.03						1.05						2.76	.85							.16								4.90
Girardville	Susquehanna				T.	.02					1.19							.28						.90	.13					T.			2.52
Gordon	do					.12					1.33							.24	.10						.76									2.55
Hamburg	Schuylkill					.09					2.40													.94										3.43
Hanover	Susquehanna	.09			.04						.89							.68	T.						.15									1.85
Harrisburg	do				.03	T.					.93						1.52							.02	.12								2.62
Huntingdon	Juniata			.02							.46							.34							.13									0.95
Hyndman	Potomac				.39	.01					.31							.04				.01	T.	.34										1.10

TABLE 2.—*Daily precipitation for September, 1909. District No. 1*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Pennsylvania—Cont'd.																																	
Kennett Square	Coast				.03						1.41						.22							.72	.43			.22					3.03
Lansdale	Schuylkill										1.24												.07	.83				.15	.39			2.68
Lawrenceville	Susquehanna				T.	.10					1.30						.35							.92							.21	2.88
Lebanon	do.	T.			T.	.10					.80						.45	T.					.02		.13							1.50
Le Roy	do.					.04					.75	.02					.05								1.16						.15	2.17
Lewisburg	do.				.02						.80	.02					.12								1.16							2.12
Lock Haven	do.				.08	T.					.64	.02					.34							1.17			T.	.12			.04	2.41
Marion	Potomac										.94						.18							T.								1.12
Mauch Chunk	Delaware					.04					1.51					.07	.28	1.40					.02		1.06				.03			4.41
Mifflintown	Juniata					.05					1.40						.25															1.70
Milford	Delaware				T.	.04					1.03					.01	.01	.71					.15		1.00				.50			3.45
Montrose	Susquehanna					.15					.28						.29								.86							1.58
Mountain House	Juniata				.28						.54						.41							T.	.14							1.37
New Germantown	Susquehanna				T.	.70					1.20						.45								.09							2.44
Ottaville	Delaware										.67							.04					.02	.14	.47			.12	.41			1.87
Philadelphia (1)	do.										1.59						.10	.22					.02	.12	.98			.46	.06			3.55
Philadelphia (2)	do.										1.85	T.					.10	.22					.02	.06	1.07			.12	.40			3.84
Philadelphia (3)	do.					.05					1.69						T.	.17					.03	.12	1.03	.02		.07	.47			3.65
Pocono Lake	do.										1.27					T.	.28	1.20					T.		1.02				.18			3.95
Point Pleasant	do.					.10					.93													.43	.57			.19	.34			2.56
Pottsville	Schuylkill				.13	.24					1.79						.19						T.		.53							2.88
Reading	do.					.09					1.23						1.53	.03					.01		.19							3.08
Renovo	Susquehanna				.35					.45							.10							1.10						.05	2.05
Scranton	do.	T.			T.	.03					.77					T.	.41							.45	.07			.07		T.		1.80
Seisholtzville	Schuylkill					.02					1.03					.02		.13	.31				.03		.56				.17			2.27
Selinsgrove	Susquehanna	.05			.01	.02					.82						.09								.90						T.	1.89
Shawmont	Schuylkill										1.11							.45					.04	.65	.90			.12	.45			3.72
Smiths Corners	do.										.82													.27	.58			.13	.41			2.21
Spring Mount	do.										.73						.01	.22					.04	.05	.51		.29					1.85
State College	Susquehanna				T.	.05					.32						.25							2.25	.02		T.					2.89
Towanda	do.	T.			T.	T.					.56						.08							T.	1.04						.13	1.81
Wellsboro	do.				.03	.14					1.10						.19								.95						.23	2.64
West Chester	Coast					.05					1.34	.01				.01	.11	.19					.01	.18	.87			.03	.22			3.02
Wilkes-Barre	Susquehanna										.60						.52							.72								1.84
Williamsport	do.				.05						.51						.12						T.	1.16					T.			1.84
New Jersey.																																
Asbury Park	Coast	T.			T.						.52							.15					.01	.02	1.56			.13	.63			3.02
Atlantic City	do.	.05			T.						1.51							T.					T.		1.47			.44	.14			3.61
Bayonne	do.					.25					.72						T.	.06					.08	.17	.80			.04	.80			2.92
Belvidere	Delaware					.52					.69						*	.27					*	.22	.96			*	.54			3.20
Bergen Point	Coast					.12					.81						T.	.08					.11	.20	.82			.10	.95			3.19
Boonton‖	Passaic					.83					.55						*	.13					.07	.13	.99			*	.74			3.44
Bridgeton	Coast				.02						1.52						*	.15							1.92			*	.40			4.01
Burlington‖	Delaware					T.					1.44						*	.24					.07	.36	.55			*	.41			3.07
Canton	Coast										1.60						*	.13					*	.20	1.53			*	.51			3.97
Cape May City	do.				.01					.03	.60							T.					.02		1.69			.15	.12			2.62
Cape May C. H	do.	T.			T.	.11					.64												.04		1.79			.04	.36			2.98
Charlotteburg	Passaic					.37					.67							.17					*	*	.77			*	.90			2.88
Chatham‖	do.					.15					.88							.25					.20	.30	.79			*	.70			3.27
Clayton	Coast				T.						1.12						T						*	.07	1.24			*	.41			2.84
College Farm	do.	T.				.02					1.44			T.				.11				T.	.13	.20	.95			.02	.86			3.73
Culver's Lake	Delaware				.02	.01					1.51					.01	.01	.52					.12	.61	.77			T.	.58			4.16
Dover	Passaic	.04				.65					.79						.08						*	.55	.37			*	.83			3.31
Elizabeth	Coast					.17					.26							T.					*	*	.93			*	.72			2.08
Englewood	do.																															
Flemington	do.	.02			T.	.10					1.15						*	.05					*	.13	.55			*	.47			2.47
Freehold	do.																															
Friesburg	Coast										1.60						*	.10					.07	.16	1.33			*	.46			3.72
Haddonfield	Delaware	T.				T.					1.04					T.	.05	.04					.05	.10	.99			.07	.34			2.68
Hammonton	Coast				T.						1.58							.04					.14	.10	1.45			*	.42			3.73
Hightstown	Delaware					.05					1.25							.04					.10	.21	.93			*	.70			3.28
Imlaystown	do.																															
Indian Mills	Coast				T.						1.29							T.					.12	.05	1.32			*	.42			3.20
Jersey City	do.					.25					.86						T.	.04					.32	T.	.60			.10	.81			2.98
Lakewood	do.																															
Lambertville	Delaware	T.			T.	.07					1.09					T.	.02	.06					.05	.22	.80			*	.48			2.79
Layton	do.					.02					.93						*	.72					.05		1.25			*	.52			3.49
Little Falls‖	Passaic	T.				.74					.93					T.	T.	.22					.25	.07	.70			.34	.52			3.77
Long Branch	Coast										.86							.10					T.		1.35			.16	.64			3.11
Mahwah‖	Passaic					.64					.80							.10					*	.40	.96			*	.70			3.60
Moorestown	Delaware	T.			T.	.03					1.04						.19	.14					.06	.01	.92			.02	.39			2.80
Newark	Passaic			T.		.07					.72							.08					.13	T.	.48			.40	.28			2.16
New Brunswick	Coast					.05					1.40							.13					.06		1.10			*	.93			3.67
Newton	Delaware					.08					.61							.23					.26	.02	1.04			*	.60			2.84
Northfield	Coast	.08									1.59												.03		1.95			.05	.39			4.09
Oceanic	do.					.12					1.22						T.	.05					.13	.04	1.17			.20	.80			3.73
Paterson	Passaic				T.	.68					.52	.13					T.	.26					.17	.05	.57			*	.80			3.18
Phillipsburg	Delaware					.49					1.09					T.	.02	.22					.05	.18	.40			.06	.52			3.03
Plainfield	Coast					.12					1.24						.05	.10					.10	.22	.86			.13	.68			3.50
Pleasantville	do.	.03									1.55							.04					.03		1.85			.20	.40			4.10
Pompton Plains‖	Passaic					1.07					1.03							.16					.14	.32	.91			*	.87			4.50
Port Norris	Coast				T.						1.00							T.							1.79			.02	.28			3.09
Rancocas	Delaware	T.			T.	.06					1.25						.01	.22					.23	T.	1.06			.15	.25			3.23
Rivervale	Coast																															
Runyon	do.					T.					1.03						*	.14					.13	T.	.82			*	.69			2.81
Somerville	do.	.03				.20					1.08						T.	.20					.16	T.	.91			*	.64			3.22
South Orange	do.					.17					.90						T.	.07					.23		.50			.20	.56			2.63
Sussex	Hudson					T.					.73						*	.23					.03	.50	1.17			*	.83			3.49
Trenton	Delaware					.09					1.61							.06					.10		1.05			*	.63			3.54
Tuckerton	Coast	.05									1.87							.25					.03		1.78			*	.60			4.58
Vineland	do.										1.57						*	.03					.04	.01	1.92			.02	.25			3.84
Woodbine	do.																															
West Virginia.																																
Bayard	Potomac				.75	.05				T.	1.47	.13				1.46							T.	.38	.45							4.69
Burlington	do.				T.	T.					1.60						.96							.67								3.23
Franklin	do.																															
Harpers Ferry‖	do.				.36		.45				.68						.10								.25							1.84
Lost City	do.				.29					T.	1.14						.13							.36								1.92
Martinsburg	do.				.33	.84					2.20						.08								.20							3.65
Moorefield	do.			T.	.53	T.											T.							.61	.09							1.25
Romney‖	do.	*	*	*	*	*	*	*	*	*	.59	.05					.37								.22							2.33
Upper Tract	do.				.31						.58						T.	T.						.70	.15							1.74
Maryland.																																
Annapolis	Coast					.30					1.90						.85								2.45							5.50

TABLE 2.—*Daily precipitation for September, 1909. District No. 1*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Maryland—Cont'd.																																	
Bachman's Valley	Coast				T.						1.54						.74							.26	.12								2.66
Baltimore	do				.11					T.	2.35				T.		.31	T.			T.		T.	.56	.64								3.97
Cambridge	do				.03						1.06						.06				.04				1.40			.09	.22				2.90
Cheltenham	Coast					.07					.95						.17	.20							2.45								3.84
Chester	do																																
Chestertown	do				T.						1.58						T.	.04							1.46				.03				3.11
Chewsville	Potomac				.18	T.					.75						.12							13									1.18
Clear Spring	do				.27	T.					.87						.03							31									1.53
Coleman	do				.06						1.58						.05	.06						.05	1.72								3.52
College Park	do																																
Cumberland	do		.05		.30						.40						.28								.28								1.31
Darlington	Coast					T.					3.05						.05	.03				T.	.02		1.06								4.21
Denton	do					.05				T.	1.96						.47	.63						T.	1.62			.16	.38				5.27
Easton	do				.02						1.23						.30				T.				1.96			.15					3.66
Emmitsburg	Potomac																																
Fallston	Coast				T.	.07					2.88						.06	.07					T.		1.08								4.16
Frederick	Potomac				T.	.55				T.	1.62					T.	2.06						T.	.44	.07								4.74
Frostburg	do				.40	.02				.45							.12			.01				.41	.16								1.57
Great Falls	do				.03	.04					.13	1.13						1.31							1.33	.11							4.08
Green Spring Furnace	do				.32						.72						.20							.22	.04								1.50
Keedysville	do				.41	.17					.95						.54							.15	.10								2.32
Laurel	Coast				.10	.02					1.35							.43							1.45								3.35
Monrovia	Potomac				.20	.68					1.79						.51								.71								3.89
Ocean City	Coast																																
Pocomoke City	do					.25					1.57							.01							.65				.19				2.67
Porto Bello	do										.79						.50	.13							.73			.05					2.20
Princess Anne	do				T.	.09				.10	1.34			T.										.08	1.65			.22					3.48
Rockville	Potomac				.18	.03					1.29		T.				1.32																
Salisbury	Coast				.01					.12	1.09			.03				.01			T.			.10	1.43	.11		.20	.13				3.23
Sanatorium	Potomac	.05			.07						.98						.59						T.		T.								1.69
Solomons	Coast				T.	.07				T.	.40						2.10	.01							.59			.05					3.22
Sudlersville	do				T.					T.	2.00						.37	.04			T.		.01	.02	2.93			.02	.30				5.71
Takoma Park	do					.19					.83	.23						.41							• 2.23								3.89
Taneytown	Potomac				.10						1.46						.40								.14								2.10
Towson	Coast				.01	.18					2.65						.15	.11					T.		1.14								4.24
Van Bibber	do																																
Westernport	Potomac	.17			.73						.58						.30						.22										2.00
Woodstock	Coast				.06	.25					1.61						.61	.56			T.			T.	.86								3.95
District of Columbia.																																	
Washington	Coast				.23					.06	.78				T.		.17	T.					T.	1.31	.87								3.42
Delaware.																																	
Delaware City	Coast					T.					1.25						T.						T.	T.	1.05			T.	.10				2.40
Dover	do										1.00						.36								1.71			.48					3.55
Milford	do				.01	.03					1.06							.16					.07	.15	1.20	.30	.05		.19				3.22
Millsboro	do				T.					.02	.41							.17						.07	2.10			.25					3.02
Seaford	do				T.	.01				.03	.87							.03			.02			.03	1.07	.15		.30					2.51
Virginia.																																	
Culpeper	Rappahannock				.06						.65						1.30								.10								2.11
Dale Enterprise	Shenandoah				.16					.24							.40							.15									0.95
Doswell	Coast										1.32						.35	.13							.38								2.18
Fredericksburg	Rappahannock				T.	.05				T.	.97						.45	.24							.49								2.20
Lincoln	Potomac				.50	.19					1.24						1.05							.66									3.64
Mt. Weather	do				.75					.38	.80						.10							.49	.06								2.58
Nokesville	do										1.21						.36								1.77								3.34
Quantico	do				T.						1.23						1.07								1.80								4.10
Shenandoah	Shenandoah				.15	.04				T.	.33						1.09							.48	.05								2.14
Stanton‖	do			.06		.04		.01		.48						.16	1.90	.42					T.	T.	.03								3.10
Stephens City	Potomac				.90						.95							.93						.70	.25								3.73
Warsaw	Rappahannock				T.	.05					1.00						T.								.40			T.					1.45
Woodstock	Shenandoah				.21						1.37						.44							.32	.14								2.48

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 1, North Atlantic States.*

Date.	Maine.												Concord, N. H.		Massachusetts.								Providence, R. I.		Connecticut.			
	Eastport.		Greenville.		Orono.		Portland.		Rumford Falls.		Van Buren.				Amherst.		Boston.		Middleboro.		Nantucket.				Cream Hill.		Hartford.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min
1...	60	48	58	46	67	46	69	54	61	54	.....	.....	66	51	70	51	78	55	78	44	78	58	78	51	70	45	72	55
2...	66	49	63	43	68	49	69	48	60	51	.....	.....	67	50	70	47	69	50	71	37	64	56	69	47	68	43	68	50
3...	71	47	72	41	79	42	78	53	76	45	.....	.....	80	43	81	43	82	54	80	35	74	56	81	50	79	45	81	49
4...	60	50	75	40	80	42	71	53	77	46	.....	.....	80	43	80	46	79	60	78	39	72	60	79	56	71	52	78	55
5...	60	54	62	48	75	59	71	50	66	48	.....	.....	71	47	72	46	71	54	72	62	69	58	72	50	68	54	72	53
6...	67	46	62	42	70	42	69	45	66	46	.....	.....	70	46	74	41	72	49	70	33	66	55	71	45	70	43	71	47
7...	62	51	62	39	72	46	73	48	66	44	.....	.....	73	41	77	45	76	55	74	42	69	55	75	53	72	49	73	54
8...	60	48	67	27	71	33	67	48	70	38	.....	.....	76	45	78	46	68	54	76	38	71	56	72	52	74	53	76	51
9...	60	48	63	45	72	44	60	51	66	48	.....	.....	72	47	80	58	71	56	76	49	73	60	77	55	70	56	77	60
10...	57	50	57	44	68	39	56	49	60	47	.....	.....	58	49	62	55	62	56	69	46	67	59	67	55	66	55	64	56
11...	68	52	66	52	70	55	73	55	70	50	.....	.....	74	55	77	58	70	59	73	61	67	62	75	60	75	52	77	59
12...	63	48	64	34	73	37	62	48	66	42	.....	.....	68	44	74	54	64	54	65	47	63	58	68	50	69	48	72	54
13...	63	45	73	34	72	35	65	45	74	42	.....	.....	72	40	74	54	72	50	72	35	66	53	70	47	70	55	70	54
14...	62	47	72	46	77	44	68	53	76	53	.....	.....	78	52	83	57	70	61	78	49	72	57	80	58	81	57	82	59
15...	60	52	65	53	75	53	61	53	66	54	.....	.....	67	55	72	61	66	59	70	54	68	56	66	55	72	59	74	61
16...	58	51	60	49	68	55	66	53	66	56	.....	.....	72	55	72	59	74	58	75	46	73	60	73	53	66	57	73	60
17...	58	51	71	50	66	57	70	58	74	56	.....	.....	78	54	80	53	75	62	73	60	73	63	76	60	76	55	78	61
18...	63	49	62	49	69	49	68	51	64	45	.....	.....	68	46	71	44	67	58	69	43	66	60	70	53	68	54	70	51
19...	62	45	65	33	71	35	61	45	66	38	.....	.....	66	37	70	41	60	50	64	38	62	54	66	46	71	45	69	45
20...	60	44	67	30	69	34	62	41	68	38	.....	.....	66	33	70	36	61	46	71	33	65	53	68	42	70	41	71	44
21...	60	46	68	30	73	42	64	49	72	41	.....	.....	68	47	69	43	64	52	72	39	69	56	72	50	64	42	70	45
22...	65	49	70	39	73	50	63	55	68	48	.....	.....	69	52	66	49	70	59	79	43	76	59	75	55	67	56	71	55
23...	64	55	73	61	79	59	71	61	78	63	.....	.....	82	67	83	66	81	68	83	66	79	65	76	66	82	59	81	67
24...	65	56	69	54	76	63	71	57	72	55	.....	.....	70	54	72	54	76	58	76	59	70	61	74	56	59	51	71	56
25...	57	54	63	42	66	51	68	55	66	46	.....	.....	69	49	70	48	65	56	66	55	61	58	66	54	68	43	68	52
26...	56	54	52	38	66	45	57	52	56	44	.....	.....	58	48	58	47	57	53	57	55	62	57	56	51	60	46	59	50
27...	62	54	60	50	65	51	64	56	64	54	.....	.....	64	52	60	52	63	56	64	54	67	60	62	54	62	53	59	53
28...	61	58	67	59	68	61	65	55	66	54	.....	.....	59	52	60	46	69	55	71	58	69	59	68	54	60	52	61	51
29...	63	55	63	43	65	53	66	53	64	46	.....	.....	69	43	73	35	65	49	70	42	62	55	70	46	67	37	71	43
30...	62	48	64	37	70	50	65	46	64	42	.....	.....	73	38	71	40	75	55	73	37	68	56	73	51	66	49	71	50
31...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	61.8	50.1	65.2	43.3	71.1	47.4	65.4	51.3	67.6	47.8	.....	.....	70.1	47.8	72.3	49.2	69.9	55.4	72.2	46.6	68.7	57.8	71.5	52.5	69.7	50.2	71.7	53.3

Date.	New Haven, Conn.		New York.												Pennsylvania.													
			Addison.		Albany.		Binghamton.		Cooperstown.		Indian Lake.		New York.		Clearfield.		Easton.		Everett.		Harrisburg.		Philadelphia.		Scranton.		Wellsboro.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	74	54	69	53	70	52	64	49	62	50	68	50	76	57	64	44	67	62	76	44	71	58	81	61	68	53	73	53
2...	71	50	76	38	70	48	69	46	61	46	62	48	71	52	72	37	72	51	68	52	75	53	76	55	70	50	77	37
3...	78	52	87	38	81	48	80	40	72	42	75	43	79	56	82	39	80	46	76	42	81	53	81	58	81	44	84	35
4...	76	55	70	57	75	57	73	57	72	50	70	36	77	64	72	57	76	54	74	56	73	64	77	63	75	56	69	55
5...	76	52	66	55	68	52	63	45	60	49	65	45	76	56	71	59	74	59	73	38	83	59	80	59	67	51	66	54
6...	69	46	80	33	73	45	71	40	65	40	68	35	71	52	75	44	72	45	71	48	75	53	74	55	73	44	79	31
7...	72	54	78	35	74	53	72	42	68	40	65	41	74	56	79	39	73	49	77	45	80	53	78	57	76	44	78	36
8...	72	53	85	42	77	47	77	44	70	40	75	30	73	62	83	35	78	53	80	44	82	54	81	60	82	49	85	42
9...	75	60	85	46	75	56	80	52	75	45	77	38	78	62	78	48	79	54	75	50	78	59	79	63	82	55	83	44
10...	66	60	79	61	65	59	67	58	61	50	70	48	69	65	87	50	72	62	78	63	69	64	68	65	67	60	71	60
11...	78	61	76	56	75	58	72	56	70	58	75	54	78	64	81	48	77	59	76	56	78	62	80	64	74	59	73	57
12...	70	55	83	54	73	52	74	55	70	52	74	43	69	62	84	46	74	54	72	50	76	58	73	62	74	52	79	51
13...	70	55	88	56	75	59	79	59	74	56	72	45	72	62	87	49	76	58	79	64	76	61	76	61	78	59	82	57
14...	78	59	96	59	85	63	88	61	78	57	83	56	79	62	92	55	78	58	84	56	81	62	80	63	91	59	92	58
15...	70	62	84	61	72	66	76	67	74	60	80	49	73	66	86	59	78	68	81	55	80	64	75	67	73	68	81	59
16...	74	60	74	60	67	63	68	56	66	60	78	57	73	74	79	60	73	64	78	64	69	63	76	65	68	60	73	57
17...	78	60	82	49	78	58	73	51	69	48	70	40	78	67	81	50	75	63	78	55	76	59	81	68	76	56	79	48
18...	72	54	71	44	66	50	66	44	60	42	65	36	73	62	78	44	72	53	75	47	74	56	76	61	70	50	69	42
19...	70	48	78	36	72	41	70	38	67	40	70	33	68	56	77	42	72	48	71	41	71	53	70	56	71	47	77	35
20...	68	48	75	42	68	47	68	45	66	40	69	32	68	56	75	42	75	52	81	52	70	50	70	57	68	47	73	40
21...	72	49	72	44	71	51	72	53	68	45	67	34	71	59	67	48	72	55	67	48	72	60	72	55	72	56	70	42
22...	71	57	78	59	71	59	77	59	74	52	69	38	73	63	75	53	74	59	77	55	79	62	77	64	77	60	77	55
23...	78	67	85	60	79	70	80	59	78	64	75	62	78	69	87	48	79	59	84	58	80	66	81	71	82	65	84	62
24...	71	56	69	47	73	56	63	46	68	52	74	52	72	58	78	46	69	60	74	53	69	58	72	59	65	50	68	45
25...	70	53	67	36	68	47	64	39	63	37	63	27	69	54	70	42	69	49	68	36	69	51	71	53	67	44	66	33
26...	61	52	65	38	66	47	63	38	60	41	62	26	64	55	67	36	67	49	64	39	68	52	68	55	66	44	63	38
27...	60	53	61	42	64	50	55	44	59	40	60	25	64	53	64	35	64	50	60	47	62	50	64	52	59	46	57	43
28...	64	48	65	33	59	47	59	40	55	40	61	40	64	52	63	33	64	44	60	40	64	50	68	53	61	44	63	29
29...	70	42	74	41	67	40	70	34	65	32	63	27	68	48	76	31	67	38	76	35	72	44	71	53	73	37	73	29
30...	71	50	69	45	66	51	60	49	56	45	68	32	68	56	74	36	66	48	62	50	65	52	71	56	63	50	66	43
31...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	71.5	54.2	76.2	47.3	71.4	53.0	70.4	48.8	66.9	47.1	69.8	40.7	72.2	59.0	76.8	45.2	73.1	54.1	73.8	49.4	73.6	56.8	74.8	59.7	72.3	52.0	74.3	45.7

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 1*—Continued.

Date.	New Jersey.								Martinsburg, W. Va.		Maryland.								Washington, D. C.		Millsboro, Del.		Virginia.					
	Asbury Park.		Atlantic City.		Hightstown.		Newton.				Baltimore.		Darlington.		Frederick.		Westernport.						Culpeper.		Fredericksburg		Staunton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	80	65	82	59	82	56	78	58	73	60	80	58	78	53	77	59	76	57	76	58	.....	.....	80	62	82	62	82	62
2...	74	51	74	52	75	46	75	45	75	48	76	55	79	49	77	47	74	44	74	51	.....	.....	74	51	77	50	78	40
3...	77	52	77	57	83	44	82	43	75	45	79	58	80	48	80	50	73	43	79	48	.....	.....	78	43	79	45	77	46
4...	72	61	72	68	77	53	75	55	80	48	78	64	74	60	79	60	77	58	79	63	.....	.....	80	59	80	60	81	51
5...	79	63	83	58	82	62	77	55	74	60	80	58	79	65	77	57	75	63	79	59	.....	.....	80	67	83	71	81	62
6...	68	48	68	51	75	40	74	41	73	45	74	63	76	42	75	44	72	39	74	47	.....	.....	73	44	73	45	73	42
7...	71	53	72	58	80	47	76	46	79	46	80	59	79	53	81	53	82	52	80	58	.....	.....	71	51	70	64	74	46
8...	71	59	73	61	82	54	80	47	80	49	79	60	80	54	82	49	80	44	81	55	.....	.....	78	47	80	52	81	48
9...	72	57	74	61	82	54	81	53	81	49	78	63	77	57	80	57	78	54	76	60	.....	.....	76	56	76	60	70	54
10...	68	63	70	63	69	59	69	56	80	58	79	67	73	65	80	65	83	64	80	66	.....	.....	84	66	84	66	82	62
11...	74	64	72	63	80	59	83	57	81	63	82	66	80	62	81	61	81	60	82	63	.....	.....	81	64	87	64	84	59
12...	70	62	72	61	75	58	75	52	77	56	78	63	75	59	76	59	80	56	77	61	.....	.....	76	59	78	60	76	62
13...	68	57	71	63	78	54	76	53	79	61	75	62	74	57	78	59	81	60	78	58	.....	.....	80	57	80	57	81	55
14...	76	60	74	63	84	56	88	54	83	59	79	65	79	60	83	61	87	61	79	66	.....	.....	84	61	83	62	85	55
15...	71	67	74	68	76	64	75	63	83	60	80	67	78	60	81	64	85	59	84	63	.....	.....	85	61	85	61	86	56
16...	71	66	75	68	78	62	70	62	79	64	74	70	75	65	73	67	80	65	76	69	.....	.....	74	67	75	65	74	61
17...	74	68	76	67	82	66	82	58	81	60	82	66	79	62	82	62	84	60	83	60	.....	.....	80	66	80	65	80	64
18...	73	62	71	63	77	52	78	50	79	51	78	62	77	56	78	53	77	47	77	56	.....	.....	78	63	79	61	76	61
19...	70	62	67	62	72	48	78	41	72	51	72	58	72	51	74	52	70	50	72	56	.....	.....	70	54	72	57	68	60
20...	65	61	69	64	72	46	68	45	72	46	71	53	70	50	71	49	73	48	73	53	.....	.....	72	49	71	53	71	53
21...	68	60	70	65	77	58	70	49	74	47	75	61	74	57	73	61	78	48	75	62	.....	.....	72	62	76	63	72	53
22...	72	66	76	67	75	59	73	58	80	56	76	64	75	62	80	61	85	61	81	61	.....	.....	79	59	83	57	79	60
23...	74	68	77	69	85	65	79	65	84	62	82	65	81	62	83	64	85	63	84	61	.....	.....	83	63	84	61	84	63
24...	72	56	70	57	75	57	75	55	72	59	65	67	74	56	72	55	72	56	68	54	.....	.....	85	59	78	58	73	59
25...	68	56	66	54	72	45	72	41	73	42	71	53	69	49	73	44	70	40	70	51	.....	.....	70	46	70	48	70	40
26...	68	56	64	56	69	47	73	41	70	44	70	54	69	49	72	46	68	39	71	52	.....	.....	68	49	71	50	70	40
27...	63	54	60	51	65	46	65	41	65	48	63	53	65	48	66	45	66	38	63	50	.....	.....	64	50	63	50	69	40
28...	64	52	65	51	67	49	69	47	67	43	69	51	67	47	67	45	65	35	67	47	.....	.....	66	48	69	48	70	38
29...	66	44	67	46	72	37	71	34	75	40	74	47	70	40	74	41	79	35	73	42	.....	.....	74	37	76	38	75	40
30...	71	53	74	55	73	45	70	46	69	45	70	55	68	51	71	46	68	45	71	50	.....	.....	74	48	76	50	72	48
31...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	71.0	58.9	71.9	60.0	76.4	52.9	75.2	50.3	76.2	52.2	75.6	59.6	74.9	55.0	76.5	54.5	76.8	57.5	76.0	56.6	.....	.....	75.6	55.6	77.4	56.8	76.5	52.7

Climatological Data for September, 1909.

DISTRICT No. 2, SOUTH ATLANTIC AND EAST GULF STATES.

CHARLES F. VON HERRMANN, District Editor.

GENERAL CLIMATOLOGICAL CONDITIONS.

Throughout the eastern portion of the United States the autumn months are usually characterized by very pleasant weather; the high temperatures that have prevailed so long begin to be interrupted by brief periods of cool, bracing weather; there is less rainfall and the number of fine days increases. Such was the case during September, 1909, over most of the area embraced in District No. 2. However, September is included in the period during which subtropical storms prevail, and accordingly there is a wide range of possibilities as regards rainfall, especially in Florida which often has to bear the brunt of these disturbances. At Jacksonville, for example, the September rainfall has varied from a minimum of 2.19 inches to a maximum of 21.79 inches in a month when subtropical storms were frequent. While several areas of low atmospheric pressure appeared near the southern extremity of Florida during the month not one was of much force. The West Indian hurricane of September 17 to 21, however, caused much damage along the Gulf coast and in the interior. This storm approached the middle Gulf coast on September 19 and hurricane warnings were promptly displayed. On the 20th the vortex of the disturbance had reached the mouth of the Mississippi River, whence it passed northward just west of the river, reaching the vicinity of Little Rock, Ark., on the morning of the 21st. The damage caused by this storm in District No. 2 was confined chiefly to the State of Mississippi and is described elsewhere. The only other climatic feature of interest for the month was the marked period of fine, clear, colder weather that prevailed after the 25th. At one station in Virginia a minimum temperature slightly below freezing occurred and light frosts, the first of the season, were general on the 28th and 29th in the northern portions of the States bordering the Gulf and in the western portions of Virginia, North Carolina, and South Carolina. This "cool wave" was sufficiently marked to cause deficiencies in monthly mean temperature at most stations in the States bordering the Atlantic Ocean. Warmer weather prevailed in Alabama and Mississippi. Some stations in Florida again reported heavy rains, namely those on the east coast between Miami and Jupiter, Fla.

TEMPERATURE.

The temperature during September was below normal in Virginia, North Carolina, South Carolina, and the larger portions of Georgia and Florida, the departures for the first three States averaging over 2°. The largest individual deficiencies were 5.9° at the regular station, Richmond, Va., and 4° or more at a few cooperative stations in North Carolina. In Virginia and South Carolina the monthly mean temperature for this month was the lowest September mean on record. Excepting a short period of cool weather during the first week in the north, the weather was quite warm during the first two decades of September, and maximum temperatures exceeding 90° occurred in all sections, and exceeding 100° in Georgia, Alabama, and Mississippi. Then a "cool wave" spread over the district under the influence of an area of high atmospheric pressure from the north, and the lowest temperatures for the month occurred from the 26th to 30th. Light frosts were general on the 28th and 29th. In Florida light frosts occurred at Wausau September 29, and it is worthy of note that only once before, in 1897, has frost formed in Florida during September since the Florida section was established.

The monthly mean temperatures ranged from 81.1° at Miami, Fla., (closely followed by 80.1° at Brunswick, Ga., and 80.0° at Biloxi, Miss.) to 60.4° at Hot Springs, Va. Monthly means below 70° occurred only from Georgia northward to Virginia. The highest temperature was 101° at several stations, namely at Blakely, Ga., on the 5th, at Pushmataha, Ala., on the 4th, at Hamilton, Ala., on the 9th and at Jackson, Miss., on the 10th. The minimum was 31° on the 28th at Hot Springs, Va. The range in temperature for District No. 2 was thus 70°, or from below freezing to above 100°.

PRECIPITATION.

The average precipitation for September was below the normal in all States in the district, except Mississippi where there was a slight excess due to the heavy rains accompanying the subtropical storm which passed over the western part of the State on the 20th. The deficiency was greatest in Florida, although the State had a fairly high September average of 4.09 inches. Virginia and North Carolina were also relatively very dry with deficiencies exceeding an inch on the average. Drought prevailed in several eastern counties of North Carolina, particularly on the lower Tar River watershed, as also in the central-western counties of Georgia. The rainfall in the three northernmost States fell in brief periods extending roughly from the 7th to 10th, inclusive, 16th to 18th, and on the 24th. In the Gulf States, after a brief period of fair weather at the beginning of the month, showers occurred frequently from the 6th to the 25th, but the rainfall was very irregularly distributed. The last few days of the month were dry and very pleasant everywhere.

The regions of maximum rainfall were as follows: On the east coast of Florida, south of Jupiter, the monthly total rainfall exceeded 10 inches at a few stations (Hypoluxo 18.16 inches and Miami 13.93 inches); in central Georgia the largest amount was 9.51 inches at Butler; in southern Mississippi the total exceeded 8 inches at two stations, Bay St. Louis, 8.05 inches and McNeill, 8.49 inches. The least rainfall is noted along the western border of Georgia, where West Point received only 0.24 inch. The extreme variability in meteorological conditions over a comparatively small area is forcibly illustrated by the difference in the total rainfall for September at the two stations, Hypoluxo and West Point.

The greatest rainfall in twenty-four hours was 5.90 inches on the 19th at Hypoluxo, Fla. Rains exceeding 2.50 inches in twenty-four hours occurred at three stations in North Carolina, at seven stations in South Carolina, at one station in Georgia and Alabama, at eight in Florida, and at eleven in Mississippi. Only one place reported an inch or over in one hour, namely Fulton, Miss., 1.20 inches in one hour on September 8. The largest number of rainy days was 16 at Hypoluxo and Key West, Fla.

RIVER CONDITIONS.

The rivers throughout the district maintained very low average stages during September and present no features of special interest. The Santee River in South Carolina experienced a moderate but unimportant rise between the 23d and 25th, reaching flood stages for short periods at Rimini and Ferguson; elsewhere the rivers did not even approximately approach the flood stages at any point.

MISCELLANEOUS PHENOMENA.

The prevailing wind direction was northeast in all States from Virginia to Florida; it was east in Alabama and north in Mississippi. The average hourly velocity exceeded 10 miles at a few regular stations, namely, Hatteras, average hourly velocity 14.4 miles; Charleston, 11.5; Savannah 10.5; Jupiter, 10.7; Pensacola, 12.6; and Sand Key, 14.7 miles. The maximum velocity was 64 miles an hour at Pensacola on September

20. Maximum winds exceeding 40 miles an hour occurred at Hatteras, 49 from the north on the 27th, Sand Key, 48 miles east on the 17th, and Mobile, 47 miles southeast on the 21st.

The average number of clear days was large in Mississippi and Alabama (18 to 16) but the amount of sunshine diminished somewhat toward the north, the number of clear days averaging 13 from Georgia to Virginia. Auroras were observed in Virginia on the 8th, 25th, and 29th.

THE WEST INDIAN HURRICANE OF SEPTEMBER 17–21.

This storm was attended by severe gales that caused enormous loss of property, chiefly in the southern and western portions of Mississippi, although the entire Gulf coast felt the effects of the storm to a greater or less extent. The official in charge of the local office of the Weather Bureau at Vicksburg, Miss., briefly describes the loss as follows:

The loss of life was not fully reported, but was confined mostly to the coast. Railroad, telegraph, and telephone companies sustained severe losses. Immense iron bridges and large and substantially built ships were wrecked along the coast. Hundreds of bath houses and many wharfs were demolished. In the interior, and especially in the southwestern counties, where the fury of the storm reached its greatest height between 11 p. m. of the 20th and 2 a. m. of the 21st, thousands of forest trees and many small buildings were laid prostrate; dwellings, churches, and stores were unroofed; barns were blown down and stock killed; and crops, especially cotton, were materially damaged.

TABLE 1.—*Climatological data for September, 1909. District No. 2, South Atlantic and east Gulf States.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Virginia.																				
Arvonia	Buckingham	350	5	66.8	.....	85	10	42	29	29	2.50	.....	1.20	0.0	5	15	10	5	w.	Rev. Plummer F. Jones.
Ashland§	Hanover	221	18	66.6	− 2.9	87	18	39	29	34	3.16	− 0.32	1.18	0.0	6	7	15	8	n.	E. L. C. Scott.
Buchanan	Botetourt	820	5	.....	.....	.....	.....	.....	.....	.....	3.77	.....	1.14	0.0	9	1	15	14	w.	D. D. Booze.
Callaville	Brunswick	250	15	67.0	− 2.6	84	17	38	29	30	3.59	+ 0.27	1.34	0.0	8	12	15	3	n.	F. M. Gage.
Cape Henry	Princess Ann	20	35	70.0	− 1.8	82	1	54	27†	23	0.78	− 3.30	0.43	0.0	5	9	7	14	n.	U. S. Weather Bureau.
Charlottesville	Albemarle	800	20	67.4	− 0.6	86	1†	46	28	30	1.21	− 3.23	0.62	0.0	5	11	14	5	se.	Leander McCormick.
Clarksville	Mecklenburg	.....	15	.....	.....	.....	.....	.....	.....	.....	3.46	+ 0.53	1.10	0.0	6	17	0	13	ne.	J. Henry Ligon.
Columbia §	Fluvanna	246	11	65.9	− 2.7	85	6	38	29	40	2.46	− 1.10	1.01	0.0	7	12	11	7	se.	Agent, C. & O. R. R.
Danville	Pittsylvania	413	9	.....	.....	.....	.....	.....	.....	.....	2.48	− 0.52	1.42	0.0	5	11	3	16	n.	C. G. Watkins.
Diamond Springs	Princess Anne	20	...	69.0	.....	85	23	44	29†	39	1.11	.....	0.51	0.0	3	.....	.....	.....	.....	Virginia Experiment Sta.
Dinwiddie	Dinwiddie	267	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. N. Colson.
Hampton	Elizabeth City	5	26	70.6	− 1.6	88	21	48	29	25	1.18	− 1.92	0.70	0.0	6	19	3	8	ne.	Hampton Institute.
Hot Springs	Bath	2,195	17	60.4	− 2.3	78	12	31	28	34	2.37	− 1.39	0.77	0.0	8	15	9	6	.....	James P. Scott.
Ivor	Southampton	87	...	68.0	.....	88	23†	36	29	38	2.35	.....	1.50	0.0	5	.....	.....	.....	.....	Agent N. & W. Ry.
Lexington§	Rockbridge	1,060	32	64.0	− 2.4	85	15	35	29	40	1.96	− 1.99	0.50	0.0	8	19	5	6	.....	Virginia Mil. Institute.
Lynchburg	Campbell	685	38	66.7	− 2.4	85	1	40	28	33	2.65	− 1.13	0.95	0.0	6	7	14	9	n.	U. S. Weather Bureau.
New Castle	Craig	1,300	...	.....	.....	.....	.....	.....	.....	.....	3.49	.....	1.28	0.0	8	11	5	14	ne.	Miss J. L. Martin.
Newport News§	Warwick	55	6	69.8	.....	89	23	48	29	27	1.99	.....	0.55	0.0	7	10	10	10	e.	Ernest W. Sniffen.
Norfolk	Norfolk	91	39	69.7	− 2.0	88	23	52	29	27	0.56	− 3.36	0.22	0.0	7	7	9	14	ne.	U. S. Weather Bureau.
Petersburg	Dinwiddie	60	22	68.4	− 2.8	88	5	42	29	32	3.77	+ 0.05	1.68	0.0	10	23	0	7	ne.	Central State Hospital.
Randolph	Charlotte	334	5	.....	.....	.....	.....	.....	.....	.....	3.04	.....	0.78	0.0	7	14	6	10.	ne.	W. B. Spencer.
Richmond	Henrico	144	30	67.4	− 5.9	85	1	47	28	25	2.89	− 0.53	1.95	0.0	7	5	19	6	n.	U. S. Weather Bureau.
Rocky Mount	Franklin	1,150	15	65.6	− 5.1	85	14†	37	29	38	2.23	− 1.21	1.00	0.0	6	14	0	16	ne.	G. W. B. Hale.
Sabot	Goochland	125	...	.....	.....	.....	.....	.....	.....	.....	3.66	.....	1.65	0.0	6	15	10	5	.....	W. A. Jacobs.
Saxe	Charlotte	350	6	67.2	.....	90	1	36	29	40	3.44	.....	1.72	0.0	6	19	0	11	ne.	State Experim. Farm.
Spottsville (near)	Surry	15	21	67.7	− 2.3	87	23	37	29	38	3.45	+ 0.07	1.26	0.0	6	14	6	10	ne.	B. W. Jones.
Williamsburg	James City	70	18	67.2	− 1.9	86	1†	42	28	32	2.56	− 1.51	1.00	0.0	7	12	12	5	sw.	Eastern State Hospital.
North Carolina.																				
Beaufort	Carteret	10	7	73.6	.....	89	24	51	29	23	2.14	.....	0.87	0.0	6	12	11	7	ne.	H. D. Allen.
Belhaven	Beaufort	4	...	70.9	.....	90	13	45	3†	40	0.83	.....	0.65	0.0	4	12	7	11	s.	William S. Hopkins.
Brewers	Wilkes	1,950	12	66.8	− 2.4	87	1†	37	29	43	2.52	− 2.05	1.32	0.0	10	9	14	7	w.	W. L. Brewer.
Caroleen	Rutherford	806	9	69.4	− 2.8	90	13	41	28†	36	6.52	+ 2.78	3.75	0.0	8	11	12	7	ne.	S. B. Tanner.
Chalybeate Springs[1]	Harnett	500	3	68.6	.....	89	23	35	29	42	2.86	.....	1.15	0.0	8	.....	.....	.....	ne.	J .A. Smith.
Chapel Hill	Orange	500	51	69.4	− 2.1	90	1†	46	3†	36	2.98	− 0.62	1.27	0.0	11	17	8	5	e.	Prof. A. H. Patterson.
Charlotte	Mecklenberg	808	33	69.0	− 1.7	87	11	47	28	28	2.06	− 1.16	1.02	0.0	8	9	10	11	ne.	U. S. Weather Bureau.
Chimney Rock	Rutherford	1,150	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. L. B. Merse.
Clinton[1]	Sampson	156	2	71.6	.....	89	16†	39	29	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	Thomas Boyette.
Eagletown	Northampton	66	4	69.1	.....	89	23	40	29	34	1.01	.....	0.28	0.0	5	15	12	3	sw.	J. T. Elliott.
Edenton[b]	Chowan	30	15	68.9	− 3.2	86	14	40	29	30	1.85	− 1.20	0.95	0.0	4	.....	.....	.....	ne.	E. R. Conger.
Fayetteville	Cumberland	170	22	70.8	− 1.2	91	23	40	29	40	2.91	− 1.39	1.10	0.0	7	.....	.....	.....	.....	Frank Glover.
Goldsboro	Wayne	102	39	69.7	− 3.1	89	5	40	29	41	2.26	− 2.32	1.00	0.0	11	.....	.....	.....	w.	Mrs. N. B. Taylor.
Graham	Alamance	656	7	.....	.....	.....	.....	.....	.....	.....	3.04	.....	0.75	0.0	9	.....	.....	.....	.....	Dr. W. R. Goley.
Greensboro	Guilford	843	28	68.5	− 2.5	89	1†	44	28†	34	2.34	− 0.63	0.88	0.0	6	.....	.....	.....	ne.	A. R. Horry.
Greenville	Pitt	75	16	.....	.....	.....	.....	.....	.....	.....	2.00	− 2.97	1.10	0.0	9	.....	.....	.....	.....	C. V. York.
Hatteras	Dare	11	35	72.8	− 1.9	85	5	57	30	19	1.35	− 3.98	1.04	0.0	5	14	10	6	ne.	U. S. Weather Bureau.
Henderson	Vance	490	16	67.2	− 4.9	86	1	44	28†	28	2.53	− 1.00	1.01	0.0	6	15	10	5	ne.	Enoch Powell.
Kinston	Lenoir	46	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev J. R. Rountree.
Lenoir	Caldwell	1,186	36	66.0	− 0.7	84	1†	34	28	38	4.48	− 0.10	1.92	0.0	10	16	3	11	s.	G. M. Goforth.
Lexington	Davidson	810	8	68.0	.....	91	1	38	29	41	0.96	.....	0.70	0.0	4	16	12	2	w.	H. R. Berrier.
Lincolnton	Lincoln	994	4	68.2	.....	89	11	38	29	38	2.80	.....	1.50	0.0	6	16	0	14	n.	L. B. Thompson.
Louisburg	Franklin	375	18	68.2	− 2.9	88	1	40	29	33	2.44	− 0.86	1.26	0.0	6	12	11	7	s.	T. B. Wilder.
Lumberton	Robeson	102	26	71.8	− 1.1	93	16†	39	29	44	2.76	− 1.52	0.89	0.0	10	.....	.....	.....	ne.	B. M. Davis.
Manteo	Dare	12	4	70.4	.....	84	24	49	3†	30	1.38	.....	1.28	0.0	3	19	6	5	ne.	U. S. Weather Bureau.
Marion	McDowell	1,425	17	67.8	− 1.4	90	11†	39	29	44	4.79	− 0.09	1.16	0.0	13	12	14	4	w.	Thomas McGuire.
Moncure[a]	Chatham	145	15	69.5	− 2.4	88	1†	43	3	40	1.92	− 2.07	0.65	0.0	9	20	4	6	nw.	B. J. Utley.
Monroe	Union	586	15	71.0	+ 0.3	92	1	40	28	35	2.51	− 1.42	1.42	0.0	6	13	4	13	ne.	T. A. Ashcraft.
Morganton	Burke	1,135	22	67.0	− 2.5	87	1	36	28	38	6.23	+ 2.08	1.94	0.0	12	13	9	8	ne.	H. D. Judd.
Mt. Airy	Surry	1,048	21	67.0	− 1.2	89	23	37	29	45	2.45	− 1.32	1.21	0.0	8	17	7	6	sw.	Prof. A. H. Merritt.
Mt. Holly	Gaston	616	12	.....	.....	.....	.....	.....	.....	.....	2.54	− 1.36	1.34	0.0	5	.....	.....	.....	.....	John W. Holland.
Nashville	Nash	190	5	69.2	.....	89	1†	37	29	40	1.75	.....	0.71	0.0	5	10	9	11	n.	J. B. Boddie.
Newbern	Craven	12	27	70.9	− 2.7	92	10	41	29	42	1.78	− 3.18	0.39	0.0	8	.....	.....	.....	ne.	James B. Hill.
Pinehurst§	Moore	650	5	70.0	.....	91	15	46	28	41	5.09	.....	4.25	0.0	6	18	7	5	ne.	General Office..
Pittsboro	Chatham	480	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. Morgan.
Raleigh	Wake	390	38	68.7	− 1.9	88	1	46	28	29	4.52	+ 1.18	1.15	0.0	8	6	12	12	ne.	U. S. Weather Bureau.
Ramseur	Randolph	442	2	67.4	.....	90	1	35	29	44	3.29	.....	1.43	0.0	4	10	14	6	ne.	P. P. Turner.
Randleman	Randolph	810	4	.....	.....	.....	.....	.....	.....	.....	1.80	.....	0.73	0.0	8	.....	.....	.....	.....	John R. Walton.
Reidsville	Rockingham	828	10	68.5	− 2.1	88	23	43	28†	36	3.01	+ 0.26	1.28	0.0	7	9	3	18	se.	E. M. Redd.
Rockingham[b]	Richmond	210	14	69.0	− 4.9	91	15	36	30	46	2.80	− 0.82	1.60	0.0	3	.....	.....	.....	.....	H. S. Ledbetter.
Roxboro	Person	600	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. C. Bradsher.
Salem	Forsythe	1,000	14	67.0	− 3.8	89	1	38	29	37	2.28	− 0.69	0.87	0.0	6	.....	.....	.....	.....	Rev. H. E. Rondthaler.
Salisbury	Rowan	760	25	68.8	− 2.9	90	1	41	29	38	3.15	− 0.01	1.15	0.0	9	9	7	14	n.	Miss Thelma Wilkinson.
Saxon	Stokes	900	17	66.2	− 3.2	85	1†	40	29†	35	1.52	− 1.76	0.82	0.0	3	12	6	12	ne.	R. P. McAnnaly.
Scotland Neck	Halifax	80	5	68.2	.....	86	1†	39	29	34	1.45	.....	0.42	0.0	6	7	14	9	s.	J. Y. Savage.
Selma	Johnston	225	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. R. J. Noble.
Settle	Iredell	700	13	69.4	− 1.6	88	1	38	29	40	5.00	+ 1.88	2.33	0.0	6	13	6	11	e.	C. H. Smith.
Sloan	Duplin	50	16	71.8	− 2.0	89	5	39[a]	29	36	3.07	− 0.42	1.57	0.0	7	14	7	9	n.	D. M. Sholar.
Snowhill	Greene	80	4	70.6	.....	89	5†	37	29	39	1.50	.....	0.37	0.0	11	8	12	10	n.	Lev. J. H. Mewborn.
Southern Pines	Moore	519	19	70.2	− 3.7	89	1†	45	29	31	2.99	+ 0.11	1.73	0.0	6	20	5	5	ne.	Mrs. P. H. Beck.
Southport	Brunswick	18	54	73.6	− 3.3	92	16	47	29	30	1.98	− 2.59	0.69	0.0	8	17	8	5	ne.	Mrs. Charles E. Taylor.
Statesville	Iredell	950	21	68.0	− 1.2	91	2	39	29	44	1.58	− 2.62	0.42	0.0	6	12	13	5	.....	D. M. Thompson.
Tarboro	Edgecombe	50	24	71.2	− 1.7	92	16†	39	29	35	0.86	− 2.31	0.42	0.0	7	10	10	10	e.	E. V. Zoeller.
Troy[a]	Montgomery	.....	...	68.2	.....	87	1	45	28	30	4.26	.....	3.70	0.0	5	23	1	6	ne.	Mrs. O. B. Deaton.
Weldon	Halifax	81	37	70.0	− 1.4	92	1†	39	29	43	2.41	− 1.33	1.43	0.0	7	.....	.....	.....	n.	H. S. S. Cooper.
Whiteville	Columbus	59	4	70.6	.....	90	13	40	29	37	5.13	.....	2.19	0.0	8	5	20	5	ne.	Rev. C. C. Smith.
Willard	Pender	51	1	70.8	.....	88	16	37	29	41	3.33	.....	1.55	0.0	7	12	10	8	n.	J. H. Jefferies.
Wilmington	New Hanover	52	38	71.0	− 2.1	88	5	48	29	26	1.23	− 4.04	0.35	0.0	10	5	16	9	ne.	U. S. Weather Bureau.
Yanceyville	Caswell	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Y. Kerr.
South Carolina.																				
Aiken	Aiken	565	25	73.6	− 1.1	96	6	46	29	35	3.10	− 0.95	1.25	0.0	4	22	5	3	w.	Dr. C. F. McGahan.
Allendale	Barnwell	186	21	76.6	+ 0.8	95	1	44	29	42	4.46	+ 0.65	1.40	0.0	5	14	6	10	.....	A. R. Hiers.
Anderson	Anderson	764	8	71.6	.....	98	1	43	29	37	5.96	+ 2.42	.....	0.0	8	14	0	16	e.	H. H. Russell.
Batesburg	Lexington	656	21	70.6	− 2.3	87	5†	44	28	29	3.43	− 0.24	1.59	0.0	7	16	3	11	s.	E. J. Hite.
Beaufort	Beaufort	20	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Lillian H. Rice.
Bennettsville	Marlboro	151	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. S. McCall.
Blackville	Barnwell	296	21	74.5	− 1.1	97	4	44	28	38	6.91	+ 2.99	4.56	0.0	9	13	7	10	ne.	Miss M. E. Lange.
Blairs	Fairfield	293	4	.....	.....	.....	.....	.....	.....	.....	4.00	.....	2.00	0.0	8	15	3	12	ne.	T. S. McMeekin.
Bowman	Orangeburg	160	8	74.3	.....	95	16	37	29	48	3.65	.....	1.80	0.0	8	20	8	2	w.	B. O. Evans.

TABLE 1.—*Climatological data for September, 1909. District No. 2.*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
South Carolina—Cont'd.																			
Calhoun Falls	Abbeville	508	16								3.57	− 0.53	0.74	0.0	8	22	0	8	ne.	P. J. Pfiefer.
Camden(1)	Kershaw		3	71.8		90	11	46	28	31	2.32		1.15	0.0	8	13	10	7	ne.	J. B. Mickle.
Camden(2)	Kershaw	222	43								3.14	− 0.68	2.10	0.0	5	15	7	8	ne.	J. C. Brown.
Catawba	York	562	4								2.52		1.22	0.0	7	12	5	13	ne.	Jas. C. Faris.
Chappells	Newberry	402	4								4.93		3.05	0.0	6	16	9	5	sw.	M. C. Rivers.
Charleston	Charleston	48	39	74.3	− 1.9	90	1	54	29	20	5.35	− 0.11	1.72	0.0	11	7	11	6	ne.	U. S. Weather Bureau.
Cheraw(1)	Chesterfield	144	21																	W. R. Godfrey.
Cheraw(2)	Chesterfield	144	16	71.3	− 2.0	89	11†	40	29	36	3.28	− 0.30	0.77	0.0	8	10	10	10	n.	Jno H. Powe.
Clarks Hill	Edgefield	456	7					44	29		3.41		1.05	0.0	6					Wm. S. Middleton.
Clemson College	Oconee	850	18	69.2	− 3.4	86	1	44	29	29	3.95	+ 0.18	1.32	0.0	8	13	2	15	s.	Prof. John N. Hook.
Columbia	Richland	351	22	72.9	− 0.8	90	1	46	29	32	1.04	− 2.41	0.47	0.0	7	10	7	13	ne.	U. S. Weather Bureau.
Conway	Horry	25	17	73.0	− 1.7	91	5	45	29†	39	1.47	− 2.95	0.56	0.0	7	8	0	22	se.	P. C. Quattlebaum.
Darlington	Darlington	175	14	72.8[a]		94	5	40	29	39	5.02	+ 1.38	1.78	0.0	11					D. C. McCall.
Dillon	Marion	100	5	70.2		94	17	39	29	30	2.28		1.02	0.0	7					A. E. Rowell.
Effingham	Florence	106	17								4.87	+ 1.37	2.02	0.0	5	13	5	12	ne.	H. B. McCall.
Perguson	Berkeley	51	2								2.35		0.90	0.0	4	13	2	9	e.	D. B. Gilliland, jr.
Florence	Florence	136	21	73.6	− 1.0	97	14	42	29	45	5.14	+ 0.93	1.38	0.0	9	14	3	13	ne.	H. K. Gilbert.
Georgetown	Georgetown	12	16	72.9	− 2.9	90	5	46	28	26	1.65	− 2.16	0.70	0.0	3	16	10	4	ne.	Wm. Alden James.
Greenville	Greenville	989	17	69.0	− 1.4	88	1	44	29†	35	4.95	+ 1.02	1.86	0.0	9	14	2	14	ne.	Mrs. S. A. Crittenden.
Greenwood	Greenwood	671	21	72.2	− 1.0	93	1	45	28	36	3.66	− 0.11	1.71	0.0	5	15	0	15	w.	M. M. Calhoun.
Heath Springs	Lancaster	568	8	72.8		95	5	50	20†	26	2.29		0.81	0.0	6	11	13	6	ne.	J. A. Weaner.
Jacksonboro	Colleton	13	1	72.4[d]		90	5	41	29	33	3.26		1.88	0.0	8	7	12	11	ne.	W. E. Haskell, jr.
Kingstree(1)	Williamsburg	54	21																	J. A. Scott.
Kingstree(2)	Williamsburg	54	15	72.6	− 2.6	95	5	47	29†	30	2.14	− 1.30	1.08	0.0	7	14	3	13	ne.	A. O. Matthews.
Liberty	Pickens	900	15	70.7	− 2.1	92	1	42	29	36	7.05	+ 2.58	2.20	0.0	10	13	10	7	e.	Jno T. Boggs.
Little Mountain	Newberry	711	16	72.2	− 2.9	92	1	49	26	29	2.78	− 1.19	1.05	0.0	6	19	7	4	e.	Dr. J. M. Sease.
Newberry	Newberry	502	5	72.3		94	1	42	29	38	4.32		1.62	0.0	9	10	6	14	e.	W. G. Peterson.
Pelzer	Anderson	873	4								4.22		2.50	0.0	9	13	4	13	e.	John M. Ward.
Pinopolis	Berkeley	54	16	71.5	− 2.9	88	5	48	30		2.08	− 2.40	0.90	0.0	3					Miss E. P. Ravenel.
St. George	Dorchester	109	21	73.2	− 1.9	90	1†	42	29	33	3.75	− 0.34	1.50	0.0	5	25	0	5		G. T. Lewis.
St. Matthews	Calhoun	209	21	71.0	− 3.7	88	13	44	29	31	2.89	− 0.62	1.03	0.0	9	14	0	16		J. S. Wannamaker.
Saluda	Saluda	530	7	71.4[e]		97	1	40	29	40	4.74		1.93	0.0	5	18	4	5	ne.	Alvin Etheridge.
Santuc	Union	512	15	71.0	− 2.0	92	11	41	29	37	2.65	− 0.76	1.79	0.0	8	10	9	11	e.	E. W. Jeter.
Smith Mills	Williamsburg	62	14								2.92	− 1.42	0.83	0.0	9	12	1	17	ne.	W. G. Walker.
Society Hill	Darlington	192	18	70.1	− 3.2	88	16	43	28	27	4.98	+ 0.83	2.55	0.0	5	10	7	13	ne.	J. J. Lucas.
Spartanburg	Spartanburg	875	18	70.6	− 2.0	93	1	42	29	40	5.69	+ 1.89	2.03	0.0	9	12	0	18		F. P. Robinson.
Summerville	Dorchester	75	12	73.0	− 2.0	89	5	42	29	35	2.23	− 1.69	0.79	0.0	10	4	22	4	e.	Miss E. H. Gadsden.
Trenton	Edgefield	620	16	69.0	− 5.9	89	14†	44	28	26	1.93	− 1.34	0.79	0.0	6	12	16	2	e.	C. A. Long.
Trial	Berkeley	35	23	73.4	− 0.1	93	5	39	29	39	1.41	− 2.40	0.35	0.0	8	4	22	4	ne.	Etsell Gaillard
Walhalla	Oconee	1,061	18	69.6	− 1.3	93	1	43	28	32	8.00	+ 2.95	2.40	0.0	9					N. L. Fant.
Walterboro	Colleton	69	5	74.0[b]		94	5	42	29	40	7.08		4.40	0.0	8	11	16	3		J. A. Westerberg.
Winnsboro	Fairfield	545	20	71.6	− 1.6	88	1†	46	28†	27	4.40	+ 1.08	2.90	0.0	3	22	7	1	se.	John W. Seigler.
Winthrop College	York	690	10	71.0	− 1.9	91	1†	43	29	33	2.32		0.85	0.0	6	15	6	9	ne.	E. R. Rivers.
Yemassee	Hampton	23	14	74.0	− 1.8	93	5	42	29	37	3.66	− 0.45	1.19	0.0	14	14	4	12		J. G. Hutson.
Georgia.																				
Abbeville	Wilcox		6								6.61		2.04	0.0	9				ne.	W. H. Calhoun.
Adairsville	Bartow	772	17	70.0[f]	− 2.6	88	1	40	29	35	2.31	− 0.91	1.03	0.0	6					Dr. J. P. Bowdoin.
Albany	Dougherty	230	24	77.1	− 0.6	99	5	46	29	35	4.65	+ 1.61	1.38	0.0	10				ne.	Geo C. Brosnan.
Allapaha	Berrien	293	20	76.6	− 0.1	99	1	40	29	46	6.61	+ 2.52	2.00	0.0	9				e.	Miss Gladys Lucas.
Americus	Sumter	362	26	74.4	− 2.2	92	1†	46	29	31	2.71	− 0.60	1.80	0.0	5				ne.	L. A. Smith.
Athens	Clarke	694	32	71.2	− 0.8	91	1	45	28	27	4.03	+ 0.45	1.22	0.0	9				e.	C. D. Cox.
Atlanta	Fulton	1,218	44	71.7	− 0.5	88	11	46	28	23	1.65	− 1.87	0.62	0.0	8	13	9	8	ne.	U. S. Weather Bureau.
Augusta	Richmond	180	43	74.2	− 0.7	92	1	44	29	34	1.30	− 1.92	0.53	0.0	7	8	10	12	ne.	U. S. Weather Bureau.
Bainbridge	Decatur	119	17	79.3	+ 2.0	100	2†	42	29	45	2.76	− 1.08	0.93	0.0	12				nw.	Mrs. C. O. Wimberley.
Barnesville	Pike	875	1	74.4[a]		93	1†	46	28	29	2.35		0.74	0.0	6					Prof. J. R. Leavell.
Blakely	Early	300	18	78.7	+ 1.6	101	5	42	29	41	3.54	− 0.16	0.83	0.0	8	9	18	3	ne.	Ralph M. Hobbs.
Brunswick	Glynn	14	11	80.1	+ 1.9	92	9†	56	30	34	6.21	− 0.87	1.98	0.0	9					J. B. High.
Butler	Taylor	650	7								9.51		2.26	0.0	9				ne.	Mrs. Mamie F. Wallace.
Camak	Warren	613	16	72.7	− 1.7	95	1	43	29	43	3.41	− 0.84	2.20	0.0	6					J. A. Chapman.
Canton	Cherokee	894	16								0.96	− 1.68	0.48	0.0	4				e.	J. M. McAfee.
Carlton	Madison	557	10								4.07	+ 0.32	1.74	0.0	9				ne.	M. C. Power.
Carrollton	Carroll		12																	Prof. J. H. Melson.
Clayton	Rabun	2,100	16	67.4	− 1.1	87	1	39	29	33	6.05	+ 0.99	2.20	0.0	9	12	6	12	e.	A. J. Duncan.
Columbus	Muscogee	262	22	78.1[a]	+ 1.1	99	4	47	29†	42	2.57	− 0.75	0.94	0.0	7				ne.	J. W. Long.
Covington	Newton	800	16								1.46	− 1.32	0.65	0.0	5				ne.	Rufus Cruse.
Cuthbert	Randolph	446	10	75.6		97	11	44	28	36	1.50		1.29	0.0	2				e.	Prof. W. McMichaels.
Dahlonega	Lumpkin	1,519	17	69.0	− 0.8	87	1†	41	29	31	4.53	+ 0.04	1.88	0.0	13	10	18	2	se.	Prof. B. P. Gaillard
Diamond	Gilmer	2,020	19	67.6	− 1.0	86	15	39	29	34	3.07	− 1.62	1.10	0.0	8	11	8	11		R. A. Kimsey.
Douglas	Coffee	500	2																	Prof. C. W. Davis.
Dublin	Laurens	452	15								3.56	+ 0.89	0.92	0.0	7				ne.	Mrs. M. E. Martin.
Ducley	Laurens		7	75.4		97	5	42	29	39	2.89		0.65	0.0	9	14	13	7	ne.	J. H. M. O'Sullivan.
Eastman	Dodge	361	18	76.6	+ 0.6	99	5	45	29	40	3.73	+ 0.16	1.07	0.0	9				e.	Miss A. M. Bohannon.
Eatonton	Putnam		6	73.2[a]		94	5	41	29	39	1.56		0.57	0.0	7					Prof. W. C. Wright.
Elberton	Elbert	710	18	73.4	− 0.8	95	1	46	28	37	3.72	+ 0.47	1.50	0.0	9	11	19	0	e.	H. A. Roebuck.
Experiment	Spalding	946	9	72.0	− 1.9	91	1†	42	28	31	1.03	− 2.15	0.43	0.0	6	7	22	1		Martin V. Calvin.
Fitzgerald	Ben Hill	515	11	77.4	+ 0.6	96	6	47	29	38	1.98	− 2.00	0.57	0.0	9	9	20	1	ne.	W. C. Wilkerson.
Forsyth	Monroe	735	27	7.29[c]	− 3.5	96	5†	40	27†	35	4.10	+ 0.83	2.00	0.0	7					Miss S. A. B. Gibson.
Fort Gaines	Clay	166	22	75.8	− 0.5	90	1†	47	29	32	1.22	− 1.86	0.50	0.0	5				se.	Mrs. Eva T. Graham,
Gainesville	Hall	1,254	33	69.1	− 1.9	89	1	45	28	27	3.40	− 1.64	1.15	0.0	9				e.	W. C. Walker.
Gillsville	Hall	1,052	19	71.5	− 1.6	92	1	45	29	33	3.48	− 0.59	1.63	0.0	9	8	10	12	e.	J. W. Casey.
Glennville	Tattnall		4	74.5		93	5	45	29†	35	4.83		1.18	0.0	11	18	8	4	e.	Wm. C. Barnard.
Gore	Chattooga		11	72.0	− 0.1	92	1	36	29	44	1.87	− 1.72	0.82	0.0	8	18	4	8	s.	H. M. Ponder.
Greensboro	Greene	598	7	74.0		96	1	43	29	32	2.78		1.43	0.0	5				e.	R. L. Caldwell.
Griffin	Spalding	975	20	73.4	− 0.4	95	11	42	28	33	2.01	− 1.14	0.80	0.0	7				ne.	V. P. Enloe.
Harrison	Washington	245	11	73.3	− 2.3	95	5	41	29	39	4.20	+ 1.62	1.55	0.0	7	21	3	6		A. W. J. Wood.
Hartwell	Hart	838	1	72.2[a]		95	1	44	28	32	5.91		2.17	0.0	6	23	1	6	ne.	Dr. W. I. Hailey.
Hawkinsville	Pulaski	235	14	77.2[c]	+ 1.6	97	5	41	29	38	2.81	− 0.36	0.96	0.0	7				e.	R. H. Wood.
Helena	Telfair	260	2	76.2		96	5	40	29	41	1.06		0.55	0.0	10	5	10	15	e.	James D. Smith.
LaFayette	Walker	871	3	70.1		88	1	37	28	33	2.15		0.47	0.0	8	14	6	10	w.	Ralph A. Snow.
Lisbon	Lincoln		3	73.5		93	1†	40	29	43	2.84		1.80	0.0	8	10	2	18	ne.	B. J. DuBose.
Lost Mountain	Cobb		9	71.6	− 1.6	90	11	40	29	35	0.66		0.47	0.0	5	7	21	2	e.	A. N. Mayes.
Louisville	Jefferson	259	17	76.8	+ 1.3	100	5	42	29	47	1.80	− 1.73	0.38	0.0	7	16	12	2		J. C. Little.
Lumber City	Telfair		1								3.69		1.70	0.0	10				e.	Walter A. Hilton.
Lumpkin	Stewart	650	16	78.1	+ 1.3	98	1	50	28	33	2.36	− 0.82	2.10	0.0	2	7	21	2	e.	A. W. Latimer.
Macon	Bibb	370	32	74.3	− 1.3	93	5	44	29	36	2.47	− 1.51	1.63	0.0	11	8	13	9	ne.	U. S. Weather Bureau.
Marshallville	Macon	300	17	76.1[a]	− 0.8	97	1†	40	29	40	3.78	+ 0.82	1.60	0.0	10	9	15	6	w.	E. C. Bryan.
Mauzy	Colquitt		11	77.8	− 0.3	98	5	43	29	38	2.29	− 2.74	0.53	0.0	8	18	9	3	e.	T. J. Hudson.

TABLE 1.—*Climatological data for September, 1909. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Georgia—Cont'd.																				
Milledgeville	Baldwin	276	21	75.2[a]	+ 0.6	96	5†	41	29	35	1.42	− 2.42	0.27	0.0	12	15	6	9	ne.	Prof. O. M. Cone.
Millen	Jenkins	158	22	74.4	− 1.6	96	5	38	22	42	4.18	+ 0.51	1.25	0.0	8	.....	.....	.....	ne.	M. G. McComb.
Montezuma	Macon	292	4	.....	.....	.....	.....	.....	.....	.....	4.00	.....	1.52	0.0	11	.....	.....	.....	ne.	W. N. Drewry.
Monticello	Jasper	800	13	74.2	− 0.8	96	5	43	28	36	2.01	− 1.28	0.59	0.0	13	.....	.....	.....	.....	Miss Maud C. Penn.
Morgan	Calhoun	337	17	76.3	− 0.3	93	1†	44	28	34	1.33	− 1.92	0.30	0.0	11	29	1	0	.....	J. J. Beck.
Newnan	Coweta	959	21	72.6	− 0.9	92	11	42	28	38	1.35	− 1.97	0.37	0.0	6	.....	.....	.....	ne.	Mrs. I. J. Milner.
Oakdale	Fulton	810	9	.....	.....	.....	.....	.....	.....	.....	1.55	.....	1.00	0.0	5	.....	.....	.....	ne.	W. R. B. Whittier.
Point Peter	Oglethorpe	1,000	20	71.6	− 0.8	95	1	41	29	35	3.90	+ 0.15	1.69	0.0	7	12	11	7	e.	C. M. Witcher.
Poulan	Worth	365	18	77.2	+ 0.7	96	5	41	29	43	1.29	− 2.26	0.41	0.0	10	18	10	2	.....	Dr. J. F. Wilson.
Putnam	Marion	.....	10	75.8[a]	− 0.7	97	1†	43	29	39	6.50	+ 2.59	2.00	0.0	7	10	8	12	e.	Mrs. J. M. Collum.
Quitman	Brooks	173	25	77.4	− 0.2	95	5	42	29	40	2.02	− 2.50	0.55	0.0	8	.....	.....	.....	ne.	A. B. Jones.
Ramsey	Murray	1,363	16	70.8	− 1.9	83	11†	41	28	35	3.94	+ 0.68	2.00	0.0	6	16	6	8	sw.	D. E. Humphreys.
Resaca	Gordon	657	16	.....	.....	.....	.....	.....	.....	.....	1.40	− 1.39	0.70	0.0	5	.....	.....	.....	se.	D. A. Norton.
Rome	Floyd	576	54	71.8	− 1.3	90	1†	40	28†	44	0.68	− 1.19	0.30	0.0	5	.....	.....	.....	e.	W. M. Towers.
St. George	Charlton	.....	3	75.4	.....	93	10	49	29†	33	1.97	.....	1.10	0.0	4	12	12	6	w.	John Harris.
St. Mary's	Camden	20	18	76.2[a]	− 1.4	95	5	52	30	30	5.13	− 3.23	1.87	0.0	10	5	12	13	ne.	David C. Sterling.
Savannah	Chatham	65	59	74.4	− 2.0	94	5	53	28	24	4.90	− 0.55	1.76	0.0	10	6	15	9	ne.	U. S. Weather Bureau.
Statesboro	Bulloch	253	9	75.1	− 1.9	96	5	42	29	38	3.97	.....	1.20	0.0	11	8	19	3	.....	J. C. Cromley.
Talbotton	Talbot	750	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. W. T. Dennis.
Tallapoosa	Haralson	1,150	11	72.6	+ 0.1	91	11	40	29	42	2.90	− 0.16	1.40	0.0	4	.....	.....	.....	e.	R. M. Strickland.
Thomasville	Thomas	273	26	76.8	− 0.8	95	5	45	29	34	6.07	+ 1.10	3.62	0.0	12	8	16	6	e.	U. S. Weather Bureau.
Toccoa	Stephens	1,050	24	67.6	− 3.6	89	1	44	29	33	6.16	+ 1.71	2.00	0.0	10	.....	.....	.....	e.	E. A. Newton.
Valdosta	Lowndes	219	4	78.2	− 1.6	100	5	42	29	43	5.69	.....	1.82	0.0	6	.....	.....	.....	w.	Miss Annie L. Twitty.
Valona	McIntosh	10	9	75.0[a]	− 2.2	92	5	48	29†	30	5.38	.....	2.00	0.0	10	18	8	4	ne.	J. M. Atwood.
Washington	Wilkes	630	22	73.8	− 0.2	94	1†	45	28	36	1.30	− 2.41	0.40	0.0	11	.....	.....	.....	ne.	Miss Ella B. Smith.
Waycross	Ware	131	20	77.8	+ 0.8	97	5	41	29	42	2.47	− 1.75	0.97	0.0	12	.....	.....	.....	se.	Thos. Sasser.
Waynesboro	Burke	86	18	72.6	− 1.3	91	5	45	30	36	3.20	+ 0.21	1.70	0.0	6	.....	.....	.....	e.	Mrs. H. W. Blount.
West Point	Troup	620	21	75.4	+ 0.1	95	11	42	29	44	0.24	− 2.87	0.18	0.0	3	.....	.....	.....	e.	E. N. Dunn.
Woodbury	Meriwether	641	9	72.4	− 0.7	90	1†	39	29	38	2.65	.....	1.78	0.0	2	10	5	15	n.	G. A. Wright.
Alabama.																				
Alaga	Houston	105	4	.....	.....	.....	.....	.....	.....	.....	3.62	.....	1.66	0.0	7	11	7	12	ne.	James L. Willis.
Anniston	Calhoun	741	18	73.4	+ 2.1	90	11	40	28	38	1.19	− 2.34	0.58	0.0	10	10	6	14	se.	U. S. Weather Bureau.
Ashville	St. Clair	685	16	72.8	− 0.3	93	5†	36	29	45	1.85	− 1.95	0.74	0.0	6	15	12	3	ne.	George R. Cather.
Auburn	Lee	732	20	76.6	+ 2.0	96	11	46	28†	38	0.86	− 2.31	0.35	0.0	7	9	12	9	n.	James T. Anderson.
Benton	Lowndes	149	8	.....	.....	.....	.....	.....	.....	.....	2.90	.....	1.02	0.0	10	18	5	7	ne.	S. T. Pruitt.
Bermuda	Conecuh	.....	22	76.9	+ 1.4	95	5†	43	29	40	2.72	− 1.09	0.93	0.0	7	10	19	1	se.	M. J. Morris.
Birmingham	Jefferson	700	21	74.4	+ 0.4	92	12	44	28	32	1.61	− 1.89	0.94	0.0	6	8	12	10	n.	U. S. Weather Bureau.
Boligee	Greene	119	5	.....	.....	.....	.....	40	28†	.....	.....	.....	.....	0.0	.....	.....	.....	.....	.....	Guy P. Brugh.
Calera	Shelby	500	8	.....	.....	.....	.....	.....	.....	.....	4.85	.....	1.00	0.0	8	19	2	9	e.	L. G. Privett.
Camp Hill	Tallapoosa	738	8	76.0	.....	95	5†	44	28	29	3.04	.....	2.00	0.0	4	19	7	4	e.	Dr. Lyman Ward.
Cedar Bluff	Cherokee	594	5	.....	.....	.....	.....	.....	.....	.....	3.15	.....	1.15	0.0	4	13	17	0	.....	Joe L. Daniel.
Citronelle	Mobile	331	21	77.0	− 0.4	94	6	46	28	29	4.93	+ 0.22	1.69	0.0	17	11	14	5	n.	George A. Maloney.
Clanton	Chilton	590	16	75.6	+ 0.8	96	5	42	29	39	4.49	+ 2.32	1.22	0.0	12	12	1	17	e.	Wallace C. Edler.
Cordova	Walker	334	15	74.3	+ 1.1	94	9†	37	29	43	1.89	− 1.10	0.98	0.0	3	18	9	3	s.	Scott Maxwell.
Cullman	Cullman	802	2	72.0	.....	93	1†	39	29	41	3.54	.....	1.46	0.0	6	14	12	4	nw.	Eugene A. Grayot.
Dadeville	Tallapoosa	760	4	.....	.....	.....	.....	.....	.....	.....	4.27	.....	1.49	0.0	5	18	6	6	e.	Dr. W. B. Fulton.
Daphne	Baldwin	.....	18	77.0	− 0.6	93	5	49	27	28	6.51	+ 0.22	1.75	0.0	11	18	4	8	nw.	John H. Young.
Demopolis	Marengo	.....	17	.....	.....	.....	.....	.....	.....	.....	3.34	+ 0.44	1.64	0.0	4	24	1	5	nw.	George E. Pegram.
Double Springs	Winston	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Charles D. Hudgins.
Eufaula	Barbour	200	25	74.5	− 1.4	92	1	42	29	37	1.68	− 1.84	0.50	0.0	12	18	4	8	e.	Dr. J. B. Whitlock.
Evergreen	Conecuh	285	25	77.3	+ 1.1	98	13	44	29†	43	1.73	− 1.91	0.68	0.0	8	17	0	13	e.	Robert L. Whitcomb.
Fayette[c]	Fayette	359	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. V. Burns.
Flomaton	Escambia	91	7	76.6	.....	98	1	46	29	30	2.78	.....	0.80	0.0	11	19	6	5	s.	T. J. Farris.
Fort Deposit	Lowndes	520	25	76.3	+ 0.4	94	11	46	28†	33	1.71	− 0.91	0.38	0.0	9	16	0	14	e.	J. L. Parish.
Gadsden	Etowah	621	15	73.8	− 0.1	90	1†	41	28	42	2.46	− 1.05	0.70	0.0	7	11	4	15	e.	D. P. Goodhue.
Goodwater	Coosa	826	23	75.8	0.0	96	4	41	29	38	2.67	+ 0.11	1.40	0.0	6	24	0	6	sw.	D. S. Brown.
Greensboro	Hale	220	30	76.8	+ 1.7	94	4†	47	28†	31	2.78	− 0.20	1.28	0.0	7	22	3	5	n.	W. E. W. Yerby.
Greenville	Butler	444	8	.....	.....	.....	.....	.....	.....	.....	0.45	.....	0.24	0.0	2	21	0	9	se.	E. M. Lewis.
Hamilton[a]	Marion	.....	13	75.0	− 0.2	101	9	39	28†	49	1.85	− 0.99	0.80	0.0	4	23	1	6	n.	Prof. H. O. Sargent.
Highland Home	Crenshaw	.....	17	75.6	− 0.6	95	3†	48	28	34	1.86	− 0.64	0.94	0.0	6	11	14	5	e.	Prof. Samuel Jordan.
Livingston	Sumter	160	25	75.8	+ 0.1	93	7	43	29†	38	2.96	+ 0.58	1.92	0.0	4	26	0	4	e.	Robert L. King.
Lock No 4	Talladega	510	12	73.8	− 0.3	92	7	39	29	42	1.77	− 1.16	0.83	0.0	5	26	0	4	n.	U. S. Engineers.
Lucy[a]	Houston	.....	4	77.5	.....	95	5†	39	29	41	3.01	.....	0.55	0.0	12	5	18	7	.....	A. L. Crosby.
Maple Grove	Cherokee	.....	16	72.6	− 0.4	93	1†	39	28	41	1.08	− 2.52	0.39	0.0	11	19	19	0	nw.	Mrs. A. L. Awbrey.
Mentone	De Kalb	1,595	2	.....	.....	.....	.....	.....	.....	.....	0.67	.....	0.52	0.0	2	17	4	9	se.	E. Mason.
Milstead	Macon	.....	6	.....	.....	.....	.....	.....	.....	.....	3.03	.....	0.87	0.0	8	11	11	8	n.	Evie Oswalt.
Mobile	Mobile	57	37	78.8	+ 2.3	95	5	52	28	25	5.42	+ 0.40	2.35	0.0	12	9	20	1	n.	U. S. Weather Bureau.
Montgomery	Montgomery	223	37	76.5	+ 0.7	95	5	48	28	33	1.59	− 1.29	0.43	0.0	8	11	12	7	e.	U. S. Weather Bureau.
Newbern	Hale	.....	16	77.6	+ 0.9	98	1†	43	28	40	6.02	+ 3.66	1.94	0.0	11	12	14	4	se.	Dr. J. Huggins.
Oneonta	Blount	857	15	71.7	− 0.8	92	1	35	29	44	1.10	− 2.09	0.86	0.0	5	12	2	16	ne.	Aquilla J. Ketchum.
Opelika	Lee	817	30	75.1	+ 0.5	94	5	45	29	36	1.41	− 1.35	0.73	0.0	7	18	3	9	e.	A. H. Read, Jr.
Ozark	Dale	400	7	76.7	.....	96	5	45	29	34	4.20	.....	2.30	0.0	4	18	5	7	s.	Miss Lucy Sellers.
Prattville	Autauga	381	9	76.0	.....	95	1	40	29	39	2.87	.....	1.25	0.0	7	14	13	3	ne.	Jos. B. Bell.
Pushmataha	Choctaw	.....	18	77.2	+ 1.6	101	4	42	29	40	4.40	+ 1.54	1.59	0.0	10	17	12	1	nw.	E. A. Carr.
Selma	Dallas	147	29	77.1	+ 0.6	98	3†	42	28	39	3.22	+ 1.12	1.72	0.0	9	18	7	5	e.	Charles F. Brislin.
Spring Hill	Mobile	312	5	.....	.....	.....	.....	49	28†	.....	.....	.....	.....	0.0	.....	.....	.....	.....	.....	Rev. J. B. Franckhauser.
Talladega[a]	Talladega	554	19	74.5	0.0	92	10	37	28	44	0.87	− 1.91	0.20	0.0	6	15	7	8	e.	Ross Bartholomew.
Tallassee	Elmore	.....	18	.....	.....	.....	.....	.....	.....	.....	0.56	− 1.93	0.27	0.0	4	17	0	13	e.	P. A. Noble.
Thomasville	Clarke	385	18	75.9	− 0.2	98	11	43	28†	39	2.82	+ 0.05	1.35	0.0	6	18	4	8	n.	J. G. Forster.
Troy	Pike	552	1	73.6	.....	92	6	48	28	28	3.26	.....	1.26	0.0	11	17	13	0	ne.	C. S. Tutwiler.
Tuscaloosa	Tuscaloosa	230	28	76.6	+ 1.2	98	8	44	28†	41	3.18	+ 0.33	2.38	0.0	5	25	0	5	se.	W. S. Wyman.
Tuskegee	Macon	.....	9	77.8	.....	94	1†	47	29	38	1.42	.....	1.02	0.0	5	5	25	0	n.	Prof. Geo. W. Carver.
Union Springs	Bullock	216	22	76.4	+ 0.7	94	5	47	29	32	9.06	+ 5.13	4.15	0.0	6	8	22	0	e.	P. L. Cowan.
Uniontown	Perry	273	23	76.8	+ 0.4	95	4†	43	28	35	3.15	+ 0.52	1.03	0.0	5	15	12	3	se.	F. D. Stevens.
Valley Head[a]	De Kalb	1,031	24	70.8	− 0.4	91	12	38	27†	42	1.20	− 2.07	0.60	0.0	3	17	4	9	se.	Dr. E. P. Nicholson.
Vienna	Pickens	590	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. L. Boone.
Wetumpka	Elmore	205	17	78.0	+ 1.0	99	6†	44	30	38	2.54	+ 0.02	1.51	0.0	6	21	0	9	n.	U. S. Engineers.
Florida.																				
Apalachicola	Franklin	24	5	78.0	.....	91	2	55	29	20	4.86	.....	1.90	0.0	7	13	8	9	se.	G. A. Whiteside.
Arcadia	DeSoto	61	8	78.8	.....	92	7†	60	22†	30	2.05	.....	0.75	0.0	15	16	10	4	e.	C. S. Bushnell.
Archer	Alachua	92	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. B. Hodgson.
Avon Park	DeSoto	150	11	79.4	− 0.7	93	8	64	5†	24	2.42	− 4.20	0.78	0.0	13	11	15	4	ne.	O. R. Thacher.
Bartow	Polk	115	13	80.0	− 0.3	95	8†	61	29	30	4.01	− 4.84	1.18	0.0	14	17	9	4	ne.	Wm. Hood.
Blountstown	Calhoun	.....	2	77.8	.....	95	2†	45	28	33	2.32	.....	1.00	0.0	4	15	15	0	e.	C. L. Hobbs.
Bonifay	Holmes	111	8	79.3	.....	97	11†	44	29	36	4.50	.....	1.30	0.0	5	20	1	9	n.	Wm. Rush.
Brooksville	Hernando	126	17	80.0	+ 0.6	95	2†	59	29	30	2.09	− 5.31	1.10	0.0	3	18	8	4	ne.	C. C. Peck.
Carrabelle	Franklin	10	13	77.6	− 0.5	92	1†	52	29	26	4.94	− 2.52	2.04	0.0	....	8	....	.....	.....	J. J. Blomquist.

TABLE 1.—*Climatological data for September, 1909. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.					Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Florida—Cont'd.																				
Cedar Keys	Levy	10	12	80.6	+ 1.4	93	2	60	29	22	1.45	− 3.77	0.49	0.0	4	30	0	0	e.	J. B. Lutterloh.
Clermont	Lake	105	16	80.1	− 0.3	95	2	63	29	28	2.33	− 5.22	1.22	0.0	7	9	20	1	e.	S. S. Fesler.
DeFuniak Springs	Walton	193	14	.....	.....	98[a]	11	.....	.....	.....	3.79	− 2.41	1.03	0.0	9	.....	.....	.....	.....	R. W. Storrs.
DeLand	Volusia	27	13	.....	.....	.....	.....	57	29	.....	3.30	.....	1.23	0.0	9	13	11	6	e.	O. B. Webster.
Eustis	Lake	56	17	79.0	− 0.6	95	2	59	28	28	0.94	− 6.51	0.37	0.0	6	23	4	3	ne.	C. T. Smith.
Federal Point	Putnam	5	17	78.2	0.0	94	2†	61	28	29	7.09	− 1.57	3.64	0.0	6	17	8	5	e.	E. S. Hubbard.
Fenholloway	Taylor	75	3	.....	.....	95	6†	.....	.....	.....	4.25	.....	1.50	0.0	4	4	18	8	sw.	J. Wigglesworth.
Fernandina	Nassau	10	12	77.1	− 1.2	92	5	59	28†	21	6.31	− 2.84	2.90	0.0	8	13	12	5	ne.	W. B. C. Duryee.
Flamingo	Monroe	4	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. R. Bradley.
Fort Meade	Polk	125	17	79.8	+ 0.6	95	8†	60	29	28	3.94	− 4.97	1.68	0.0	7	20	7	3	ne.	G. L. Brodrick.
Fort Myers	Lee	12	17	78.8	− 1.2	89	2†	67	28†	21	5.07	− 2.80	2.48	0.0	10	21	8	1	e.	M. M. Gardner.
Fort Pierce	St. Lucie	6	8	80.3[b]	.....	94[b]	1	68[b]	6	21	7.39	.....	.....	0.0	12	.....	.....	.....	ne.	R. L. Goodwin.
Gainesville	Alachua	176	23	78.4	+ 0.4	93	2†	57	29	25	1.48	− 4.38	0.75	0.0	7	19	8	3	ne.	J. P. H. Bell.
Grasmere	Orange	175	13	78.6	− 0.7	93	2†	61	29	27	3.33	− 4.40	1.06	0.0	11	24	6	0	.....	J. B. Escott.
Hilliard	Nassau	69	1	75.8	.....	92	1†	50	28	29	2.17	.....	1.00	0.0	7	21	4	5	.....	D. W. Griffing.
Huntington	Putnam	56	12	77.6[a]	− 1.6	94[a]	11	58[a]	29	27	2.63	− 4.98	1.80	0.0	.....	.....	.....	.....	.....	E. C. Walker.
Hypoluxo	Palm Beach	4	9	79.7	− 1.2	91	1	69	6	21	18.16	.....	5.90	.....	16	17	5	8	n.	G. A. Angervine.
Inverness	Citrus	43	8	78.0	.....	92	2	58	29	27	0.96	.....	0.68	0.0	2	0	28	2	ne.	W. H. Miller.
Jacksonville	Duval	101	37	77.0	− 0.3	91	1	56	23	19	4.98	− 3.05	2.93	0.0	9	8	18	4	e.	U. S. Weather Bureau.
Jasper	Hamilton	152	11	.....	.....	.....	.....	45	28	.....	2.45	− 2.31	1.10	0.0	3	.....	.....	.....	ne.	G. W. Duncan.
Johnstown	Bradford	125	14	77.7	− 1.0	96	5	47	29	39	1.45	− 4.68	0.90	0.0	3	.....	.....	.....	.....	A. M. C. Brasch.
Jupiter	Palm Beach	34	21	80.2	− 0.4	91	1	70	13	17	7.59	− 1.97	2.84	0.0	14	8	16	6	e.	U. S. Weather Bureau.
Key West	Monroe	14	38	80.6	− 1.9	88	12	72	26	15	6.35	− 0.44	1.18	0.0	16	5	20	5	ne.	U. S. Weather Bureau.
Kissimee	Osceola	65	17	79.2	− 1.0	92	2†	61	29	24	2.93	− 4.99	0.72	0.0	10	5	25	0	ne.	J. A. Simpson.
Lake City	Columbia	210	29	77.6	− 1.1	95	5	49	29	33	2.35	− 2.39	2.09	0.0	4	12	13	5	ne.	W. B. Knight.
Live Oak	Suwanee	109	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. O. Henry.
Macclenny	Baker	125	13	76.2[d]	− 2.6	94[d]	2	45[d]	29	36	1.63	− 3.76	0.60	0.0	4	.....	.....	.....	e.	Griffing Bros. Co.
Madison	Madison	200	6	78.6	.....	96	5†	49	29	34	2.11	.....	0.65	0.0	8	9	9	12	ne.	E. J. Vann.
Malabar	Brevard	24	8	80.9	.....	95	15	64	29	27	3.92	.....	1.10	0.0	16	.....	.....	.....	e.	J. F. Farley.
Manatee	Manatee	8	17	79.8	− 0.2	91	14†	64	29	20	4.24	− 3.33	1.37	0.0	13	3	24	3	e.	F. C. Whitaker.
Marianna	Jackson	80	9	79.9[j]	+ 2.2	97[j]	5	.....	.....	.....	3.62	− 3.50	1.36	0.0	7	.....	.....	.....	.....	J. L. Behymer.
Merritt's Island	Brevard	20	30	78.6[f]	− 1.7	89[f]	1†	66[f]	28	21	4.97	− 2.97	2.26	0.0	5	.....	.....	.....	ne.	C. D. Provost.
Miami	Dade	5	13	81.1	− 0.3	94	1	70†	5	21	13.93	+ 4.05	2.75	0.0	14	15	7	8	ne.	E. V. Blackman.
Middleburg	Clay	10	8	.....	.....	95[e]	2	51	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. A. Chalker.
Molino	Escambia	49	8	76.6	.....	95	3†	44	29	38	4.25	.....	1.35	0.0	11	12	15	3	.....	W. H. Trimmer.
Monticello	Jefferson	207	4	77.8	.....	93	2†	50	29	28	4.57	.....	1.31	0.0	6	21	5	4	ne.	E. C. Potter.
Mt. Pleasant	Gadsden	260	5	75.9	.....	93	2	42	29	35	3.38	.....	0.81	0.0	11	.....	.....	.....	e.	Miss A. Grubb.
Newport	Wakulla	.....	8	77.0	.....	95	2	42	29	27	1.66	.....	0.60	0.0	3	27	0	3	sw.	J. W. Ladd.
New Smyrna	Volusia	9	21	77.2	− 1.7	89	2	62	27	20	6.68	− 1.64	2.55	0.0	11	.....	.....	.....	.....	F. Nordman.
Ocala	Marion	98	22	79.2	+ 0.5	96	2†	61	28	28	2.50	− 4.85	1.12	0.0	8	12	15	3	.....	F. T. Schreiber.
Orange City	Volusia	39	19	.....	.....	96	2†	.....	.....	.....	2.07	− 5.17	0.62	0.0	6	17	11	2	se.	J. D. Graham.
Orlando	Orange	111	17	78.1	− 1.5	91	11	61	29	25	3.41	− 4.73	0.67	0.0	11	10	8	12	e.	James Thomson.
Pensacola	Escambia	149	31	77.8	− 0.1	91	5	54	28	21	2.25	− 2.98	1.00	0.0	7	11	16	3	n.	U. S. Weather Bureau.
Plant City	Hillsboro	121	17	78.6	− 0.9	93	8	60	28†	24	0.75	− 7.10	0.55	0.0	2	.....	.....	.....	.....	E. B. Trask.
Rockledge	Brevard	28	1	78.4	.....	90	1†	65	5	22	5.59	.....	1.52	.....	8	21	5	4	ne.	J. H. White.
Rockwell	Marion	10	10	79.2[d]	− 1.6	94[d]	2	57[d]	29	25	1.55	− 4.45	0.70	0.0	3	.....	.....	.....	.....	Dunellon Phos. Co.
St. Andrew	Huntington	14	14	77.8	+ 0.1	94	2	51	30	30	4.76	− 1.49	1.11	0.0	11	20	9	1	e.	W. A. Emmons.
St. Augustine	St. Johns	10	59	77.8	− 0.8	90	2	53	29	28	4.88	− 2.13	2.61	0.0	8	11	10	9	se.	J. R. Palmer.
Sand Key	Monroe	46	6	80.5	.....	90	21	68	28	14	4.04	.....	1.93	0.0	11	7	17	6	ne.	U. S. Weather Bureau.
St. Leo	Pasco	140	14	78.6	− 1.3	92	2	58	29	26	2.58	− 4.53	1.31	0.0	9	7	18	5	ne.	G. Schneider.
Satsuma Heights	Putnam	98	1	76.3	.....	91	2†	56	29	28	4.35	.....	2.03	0.0	7	12	15	3	e.	Satsuma Co.
Switzerland	St. Johns	10	13	76.7	− 0.9	91	2	57	29	24	7.29	− 1.17	2.40	0.0	10	.....	.....	.....	.....	W. C. Steele.
Tallahassee	Leon	192	24	76.4	− 0.4	92	2†	53	29	24	4.72	− 0.49	1.05	0.0	11	8	15	7	n.	W. H. Markham.
Tampa	Hillsboro	79	19	79.7	+ 1.4	92	8	60	29	24	2.30	− 5.11	0.96	0.0	12	7	20	3	ne.	U. S. Weather Bureau.
Tarpon Springs	Hillsboro	20	16	79.9	+ 0.5	93	13†	58	29	28	4.28	− 2.69	1.64	0.0	12	17	11	2	w.	A. P. Albaugh.
Titusville	Brevard	6	17	79.7	+ 0.6	94	2	62	28	23	6.15	− 2.75	1.98	0.0	13	2	16	12	ne.	F. M. Taylor.
Wausau	Washington	250	12	79.0	+ 1.2	98	1†	45	27	34	2.77	− 4.10	0.97	0.0	6	13	15	2	ne.	C. Jones.
Mississippi.																				
Aberdeen	Monroe	210	21	74.9[e]	+ 1.5	99	4	39[e]	29	46[e]	0.75	− 2.01	0.65	0.0	2	20	9	1	n.	L. D. Godfrey, Jr.
Agricultural College	Oktibbeha	424	19	76.0	+ 1.0	100	12	42	28	37	2.78	+ 0.13	1.68	0.0	2	14	15	1	n.	Prof. W. R. Perkins.
Bay St Louis	Hancock	28	16	78.7[b]	− 0.2	94	6	52[d]	28	22[d]	8.05	+ 2.71	4.00	0.0	8	14	13	3	s.	Brother Stanislaus.
Biloxi	Harrison	24	18	80.0[a]	+ 1.3	98[a]	6	52[a]	28	28[a]	5.72	− 0.85	.....	0.0	10	20	7	3	se.	Miss M. Josie Pope.
Booneville	Prentiss	504	15	71.8	− 2.1	95	1	43	28†	31	3.72	+ 1.19	1.21	0.0	7	17	10	3	se.	Dr. D. T. Price.
Brookhaven	Lincoln	500	21	77.0[b]	+ 0.6	98[b]	5†	42[c]	29	39[d]	5.57	+ 1.96	4.30	0.0	7	25	1	4	e.	W. J. Bee.
Columbia	Maroon	100	5	.....	.....	.....	.....	.....	.....	.....	7.14	.....	3.76	0.0	9	23	2	5	nw.	N. R. Drummond.
Columbus	Lowndes	250	21	76.4	+ 0.5	98	4†	40	29	45	1.25	− 1.92	0.56	0.0	6	17	8	5	se.	J. B. Love.
Crystal Springs	Copiah	468	17	76.1	− 0.2	96	10†	44	28	35	3.61	+ 0.58	3.20	0.0	5	27	2	1	.....	D. H. Miller.
Edinburg	Leake	.....	1	74.4[b]	.....	99	11	40[c]	29	44[c]	3.56	.....	1.67	0.0	7	18	5	7	s.	J. Y. Blocker.
Enterprise	Clarke	248	4	.....	.....	.....	.....	.....	.....	.....	4.09	.....	2.25	0.0	9	.....	.....	.....	.....	J. B. Thompson.
Fulton	Itawamba	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.82	.....	2.48	0.0	6	18	3	9	n.	A. L. Summers.
Hattiesburg	Forest	154	16	78.0	+ 0.5	100	5	44	29	36	5.64	+ 1.35	3.10	0.0	6	20	1	9	s.	T. C. Spence.
Hazlehurst	Copiah	460	19	76.8	+ 0.1	99	12	44	28†	40	5.14	+ 2.51	2.45	0.0	5	25	0	5	e.	J. D. Granberry.
Jackson	Hinds	280	22	77.3	+ 1.2	101	10	42	29	41	3.31	+ 0.41	2.87	0.0	7	20	9	1	s.	Frank J. Heintz.
Lake	Scott	446	21	75.0	+ 0.7	96	8†	39	28†	43	2.96	+ 0.24	1.37	0.0	5	19	6	5	se.	J. A. Freeman.
Lake Como	Jasper	.....	6	.....	.....	.....	.....	41[a]	2?†	.....	3.87	.....	1.70	0.0	5	10	17	2	n.	C. Thigpen.
Laurel	Jones	241	5	78.8	.....	98	5†	43	28	39	4.37	.....	2.15	0.0	7	23	5	2	ne.	Thos. W. Flynt.
Leakesville	Greene	.....	15	78.0[b]	+ 0.1	96[b]	5†	45[b]	29	42[d]	5.05	+ 0.26	.....	0.0	4	27	0	3	.....	Dr. Samuel Pool.
Louisville	Winston	561	20	75.7	+ 0.7	99	9†	43	29	40	2.32	− 0.38	1.15	0.0	4	.....	.....	.....	.....	B. T. Webster.
McNeill	Pearl River	185	21	76.7	.....	95	1†	47	29	33	8.49	.....	4.75	0.0	8	13	15	1	se.	Finis E. Carleton.
Macon	Noxubee	230	6	76.2	+ 1.1	99	4	41	29	44	1.32	− 2.08	0.62	0.0	5	21	6	3	w.	Prof. E. B. Ferris.
Magnolia	Pike	415	13	76.8	0.0	96	5†	45	28	35	5.10	+ 1.08	3.50	0.0	9	9	19	2	nw.	Miss Ruby V. Roberts.
Meridian	Lauderdale	375	19	75.2	+ 2.5	94	4	43	28	36	6.18	+ 2.71	2.38	0.0	11	14	14	2	n.	U. S. Weather Bureau.
Merrill	Greene	76	4	.....	.....	.....	.....	.....	.....	.....	5.08	.....	3.00	0.0	6	20	3	7	n.	L. C. Helms.
Monticello	Lawrence	209	2	76.4	.....	99	10	40	28†	44	5.46	.....	3.09	0.0	9	14	15	1	se.	Dr. G. A. Teunisson.
Okolona	Chickasaw	311	21	75.4	+ 0.9	98	1†	42	29	43	2.25	− 1.51	1.10	0.0	5	21	3	6	s.	D. H. Shell.
Pascagoula	Jackson	15	.....	80.4[b]	.....	94[b]	6†	.....	.....	.....	.....	.....	.....	0.0	.....	.....	.....	.....	.....	Tom Swartwout.
Pearlington	Hancock	10	21	77.6	+ 0.1	95	6	47	28	35	5.11	− 0.55	2.95	0.0	8	14	11	5	se.	Miss Annette Koch.
Porterville	Kemper	.....	4	74.0[i]	− 1.2	101[i]	12	40[i]	27	43[i]	.....	.....	.....	0.0	.....	.....	.....	.....	n.	W. G. Sanders.
Shubuta	Clarke	201	4	.....	.....	.....	.....	.....	.....	.....	4.36	.....	1.56	0.0	7	.....	.....	.....	.....	Geo. A. Floyd.
Waynesboro	Wayne	191	22	75.8	+ 0.3	96	6†	41	29	41	4.53	+ 1.55	2.00	0.0	8	18	2	10	n.	R. S. Burke.
Woodland	Chickasaw	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.17	.....	1.50	0.0	5	.....	.....	.....	.....	Tallahatchie Drain. Com.
Louisiana.																				
Pearl River	St. Tammany	.....	4	.....	.....	.....	.....	.....	.....	.....	7.38	.....	4.40	0.0	12	23	5	2	e.	Geo. F. Bancks.

TABLE 2.—*Daily precipitation for September, 1909. District No. 2, South Atlantic and east Gulf States.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Virginia.																																	
Arvonia	James							.05	T.	.95							.15	.15							1.20								2.50
Ashland	do							.03		.10	1.18						1.00	1.10							.75								3.16
Buchanan	do				.63	.07			.25		.94	.30						.30	1.14	.08		.06			T.								3.77
Callaville	Chowan							.39	1.11							.02			1.16						.50	.06	.17	T.					3.59
Cape Henry	Coast							.17	.05		.43		T.	T.				T.			T.		T.	.04	T.		T.	.09					0.78
Charlottesville	James							T.		.21	.62						.30		.07	T.		T.		T.	.01								1.21
Clarksville	Roanoke								.45		1.10	.60						.15							.86	.30							3.46
Columbia	James				.05			.03		.06	1.01						.31	.10							.90								2.46
Danville	Roanoke				T.	T.			.26	T.	1.42	T.						.14	T.						.60	.06							2.48
Diamond Springs	Coast							.18			.51																	.42					1.11
Dinwiddie	Chowan																																
Hampton	Coast	.09						.10	T.		.70		.06												.07				.16				1.18
Hot Springs	James				.31	.02				.02	.55						.32		.37			.01			.77								2.37
Ivor	Chowan							.20			1.50						.10								.30			.25					2.35
Lexington	James				.07			.16		.25	.50						.35	.30	.32		.01			T.									1.96
Lynchburg	do			T.	.28			.21	T.	.65	.34						.95				T.			.92	T.								2.65
Newcastle	do			.04	.10			.07		.10	1.28							.74		.04					1.12								3.49
Newport News	Coast	.30			T.	T.		.09	T.	T.	.33		.01	T.				T.	.55		T.		T.		.22			.29					1.99
Norfolk	do	T.			T.	T.		.07	.01	T.	.21		.03	T.				T.	.01		T.		T.		.01			.22					0.56
Petersburg	James				.05			.30	T.	.16	1.68	.05					.31	.60	.08						.49	.05							3.77
Randolph	Roanoke								.24		.36	.88						.18	.32						.78	.28							3.04
Richmond	James				.01	T.		.09	T.	.41	1.63						.47	.01	T.				T.		.27								2.89
Rockymount	Roanoke				.25			.24		1.00	.22						.34					.18												2.23
Sabot	James				T.			.01		.11	1.65						.68	.12							1.09								3.66
Saxe	Roanoke						.25		.22	1.72						.45	.05								.75								3.44
Spottsville (near)	Chowan				T.			.34		T.	1.26						.11	.61							.55			.58					3.45
Williamsburg	James				T.			.15	.26		1.00							.15		T.					.40		.45	.15					2.56
North Carolina.																																	
Beaufort	Bogue Sound	.02				T.			.07			.73									.42					.03		.87					2.14
Belhaven	Pungo		.10					.08																				.57	.08				0.83
Brewers	Pedee			.20	T.		.13		.20	.03							1.32	.06	T.	.05	.13	.35	.05										2.52
Caroleen	Santee				T.			T.		T.						.18	3.75	.37			.10	.80	1.00	.25	.07								6.52
Chalybeate Springs	Cape Fear					T.		.08	.21	.78	.09							.17	.35		.03			1.15									2.86
Chapel Hill	do					T.		.22	.04	.65	.13						.66	.61	.08	.09	.10	.02			.38								2.98
Charlotte	Santee				.12	T.		T.		T.	T.			T.			.16	.30	.93	.46	.01		.03		.05								2.06
Chimney Rock	do																																
Clinton	Cape Fear																																
Eagletown	Chowan	T.			T.	T.		.14	.25	T.	.15			T.				T.			T.				.18			.28					1.00
Edenton	Albemarle Sound																																
Fayetteville	Cape Fear								.23		.30	1.10					.19			.05		.62				1.02							2.91
Goldsboro	Neuse	.10						.68	.32	.04	.06			T.			.04	.02	.11	.35	.49	T.	T.		.05		T.						2.26
Graham	Cape Fear					.02		.35		.63			.01					.52	.64			.65			.67	.75							3.04
Greensboro	do				T.	T.		.28		.40								.88		.15					.23	.40							2.34
Greenville	Tar	.20	.05					.22	.65	.03										1.10		.10				.10			.15				2.00
Hatteras	Pamlico Sound					T.		.03				.01									.26		T.		T.		.01	1.04	T.				1.35
Henderson	Tar							.13	.17	1.01	.31						T.	.10							.81								2.53
Kinston	Neuse																																
Lenoir	Santee				.27			.05		.07	.52						1.92	.18	.54	.09		.26	.58										4.48
Lexington	Pedee				T.	T.		T.		.65	.10						T.	.70							.11								0.96
Lincolnton	Santee				.35											1.50	.50		.10				.25	.10									2.80
Louisburg	Tar				T.	T.			.22	.23	.67							.06	T.						.90	.36							2.44
Lumberton	Lumber	.09						.18		.08	.89	.43					.02	.24	.34	.38						.11								2.76
Manteo	Roanoke Sound						.08				.02																		1.28				1.38
Marion	Santee				.13	.01		.09		.17	.02						.38	1.16		.36	.07		.76	1.15	.16	.33								4.79
Moncure	Cape Fear	T.					T.		.21	.06	.42								19	.65	.02		.10			.22	.05							1.92
Monroe	Pedee							T.		T.							.16	1.42	.15	.31				.17	.30								2.51
Morgantown	Santee				.30			.08	T.	.15							.04	.85	1.94	.84	.18		.10	1.07	.65	T.	.03						6.23
Mount Airy	Pedee				.21			.25		.53	.06						1.21					.04	.09	.06									2.45
Mount Holly	Santee							.32		T.								1.34	.20	.52	T.	T.	.16	T.									2.54
Nashville	Tar					T.	T.		.35	.25	.37	.07		T.	T.	T.				T.		T.						.71					1.75
Newbern	Neuse	.18	T.						.04		T.	.10		T.		.22			.11	.37		.39					T.		.37				1.78
Pinehurst	Lumber								.02		.08							4.25	.63	.16		T.			.55								5.09
Pittsboro	Cape Fear																																
Raleigh	Neuse				T.			.10	.20	1.10	.83			T.			.24		1.06		.09		T.		.96								4.52
Ramseur	Cape Fear							T.			.31							1.43		1.00				.55									3.29
Randleman	do								.24		.13	.02					.03	.73		.40					.16	.09							1.80
Reidsville	do				.67				.28		1.28	.03						.83	.10						.42								3.01
Rockingham	Pedee										.50							.70							1.60								2.80
Roxboro	Roanoke																																
Salem	Pedee							.21		.35							.40	.10	.35						.87								2.28
Salisbury	do				.03	.12			.04		.05						.10	1.15	1.14						.48	.04							3.15
Saxon	Roanoke								.38		.82						.32																1.52
Scotland Neck	Tar							.03	.40	.13								.42							.32			.15					1.45
Selma	Neuse																																
Settle	Pedee				.16	T.		.25		.26							1.00	2.33	1.00														5.00
Sloan	Cape Fear	.02						T.	.55		.39	.22						1.57	.21									.11					3.07
Snow Hill	Neuse	.05						T.	.36	.04	.05						.12	.37	.24	.02	.10					.05		.10					1.50
Southern Pines	Cape Fear							T.	.05	.10	.10						.16	1.73	T.						.85								2.99
Southport	do	.13					T.	.69	.25		.02					.15				T.	T.	.52					.10	.12					1.98
Statesville	Pedee				.38			T.		.20							.42	.23	.24	T.			T.	.11									1.58
Tarboro	Tar		.05						.42		.12	.02								T.		.04	T.			.05			.16				0.86
Troy	Pedee								.02							T.	.03	3.70	.12						.39								4.26
Weldon	Roanoke					T.			.37	.24	.31	.02						.04	T.						.17	1.26							2.41
Whiteville	Waccamaw							T.	T.	T.	.40	.50				.40	.30	.60	.70	2.19	T.						.04							5.13
Willard	Cape Fear								1.55	T.	.63	.15	.47					.22	.21									10					3.33
Wilmington	do	.33						.02	.35		.29	T.			.04	.05		.02	T.		.04	T.	T.			.02	T.	.07					1.23
Yanceyville	Roanoke																																
South Carolina.																																	
Aiken	Edisto								.35							1.20	1.25				.30												3.10
Allendale	Savannah								.70		.90						1.36	1.40	.10														4.46
Anderson	do								.06							.51	.55		4.11	.05	.10	.06	.52										5.96
Batesburg	Edisto							T.								.38	.27	1.59	.20	.22		.09		.68								3.43
Beaufort	Coast																																
Bennettsville	Pedee																																
Blackville	Edisto							.08			.11			T.	.90	4.56	.10	.34	.21		.21				.40								6.91
Blairs	Broad											.16	.24				.34	2.00	.34	.50			.36		.06								4.00
Bowman	Edisto												.16		.15	T.	.13	1.80	.40	.18		.15			.68								3.65
Calhoun Falls	Savannah									.39					.13	.35	.69	.72	.11		.44					.74							3.57
Camden (1)	Wateree					T.		T.	.11	.04		T.			.09		.67	1.15	.01	.16					.09								2.32
Camden (2)	do									.20		.26					2.10			.38						.20							3.14
Catawba	Catawba									.06					.02	.14	.98	1.22	.06						.04								2.52
Chappells	Saluda													.08			1.03	3.05	.52	1.08			.10										4.93
Charleston	Coast					T.	.06	.04			1.20	1.70	.02		.23	.52	.15	.15	.17		1.11						T.						5.35
Cheraw (1)	Pedee	T.					T.		.07		.03	.37						.64	.48	.77					.20	.72							3.28

TABLE 2.—*Daily precipitation for September, 1909. District No. 2*—Continued.

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
South Carolina–Cont'd.																																	
Cheraw (2)‖‖	Pedee								1.05						.22	T.	.52	.63	.81				.16										3.41
Clarks Hill	Savannah										.04					1.32		.23	.67			.15	.95	.19	.40							3.95
Clemson College	...do																	.56	T.	.07	.43	T.										1.47
Columbia	Congaree					T.			T.		T.				T.	.02	.39	.08	.03	.01		.07		.44	T.							1.04
Conway‖	Waccamaw	.12						.08	.06			.15						T.	.07	.43		T.										1.47
Darlington	Pedee	.15							.15	.03	.02	1.29				.05		1.78	.08	.51					.03	.93							5.02
Dillon	Little Pedee							.04			.10	.07	.46			.07		.52	1.02			T.			T.							2.28
Effingham‖	Lynches	.90							.15			1.60						.20	2.02													4.87
Ferguson‖	Santee															.90		T.	.75		.30							T.				2.35
Florence‖	Pedee	.15							.51	.08		1.25	.86			.26	T.	.14	1.38	.51												5.14
Georgetown	Coast						.60	.35			.70							T.	T.	T.												1.65
Greenville‖	Saluda									.02	.10							.57	.72	.85	1.86		.05	.12	.66							4.95
Greenwood‖	...do															T.	.05	1.71	.98	.86					.06							3.66
Health Springs	Waterce										.08				.45		.81	.57	.31						.07							2.29
Jacksonboro	Combahee						T.	T.	T.			1.88	.05	.07	.17	T.		.10	.63	.09		.17			T.							3.16
Kingstree (1)‖	Black								.16	.22	.15	1.08						.10	.33	T.	.10											2.14
Kingstree (2)‖	...do																															
Liberty	Savannah			T.	T.	T.			T.	.60	.01					.79	.10	.25	2.20	.60		.10	2.20	.20								7.05
Little Mountain	Saluda															1.05	.73	.53	.11			.31	.05									2.78
Newberry	...do					T.			T.	.02	.20	.01			T.	1.16	1.62	.75	.44	T.		11	.01									4.32
Pelser‖	...do									T.	T.	.06				.04	.26	.34	.40	.42	T.		.10	2.50	.10							4.22
Pinopolis	Cooper					.48				.70				.90																		2.08
St. George‖	Edisto									1.40		.20							1.50		.25					.40						3.75
St. Matthews‖	Santee	.01							.05		.05				15		.91	.31		.30	.06					1.05						2.89
Saluda	Saluda					T.									.80	T.	45	1.93	1.35			21										4.74
Santuc	Broad								T.	T.	.04					.84	.95	.45	.06	.05		14	.14	T.								2.65
Smith Mills‖	Pedee	T							.18	.16	.09	.61	.36				.23	.30		.83	.16											2.92
Society Hill	...do						.01	.08									2.55	.67							1.67							4.98
Spartanburg‖	Broad									.12	.02						.05	1.98	.88	.73			.13	1.70	.08							5.69
Summerville	Ashley	T.					.05	.01	T.	T.		.79	T.		.68	.11	.20	.14	.07	T.		.17	.01									2.23
Trenton	Edisto															.30	.05	.70		.40		.24	.06									4.74
Trial	Santee							T.	.23	.08	.25				T.	.10		.25	.35	.07					.08							1.93
Walhalla	Savannah									.63	.03					2.40	.50	.42	.67			24	2.09	1.02								1.41
Walterboro	Ashepoo							.18	.20			1.73	.05	T.	.20	T.		4.40	.10			.22			T.							8.00
Winnsboro	Broad					T.										T.	2.90	.50	1.00				T.								7.08
Winthrop College	Catawba					T.		T.		T.		T.				.56	.85	.34	.57	.03			.03									4.40
Yemassee‖	Combahee	.03						T.	.07	.04	.34	1.19	.02		.32	.08	.61		.39	.24	.21		.06			.06						2.38
Georgia.																																3.66
Abbeville‖	Ocmulgee						.05		*	.38	.20		.04	.26		T.		2.04	1.72	1.88	.04												6.61
Adairsville	Coosa									.76									*	.32			.20	1.03								2.31
Albany‖	Flint	*	.40			*	.85							*	.28	1.37	*	.08	.05	*	.06	*	1.38	.16	.02							4.65
Allapaha‖	Allapaha					*	.52	2.00	*	.90	*	.47	.44	.13	*	.15		1.90							*	.10							6.61
Americus‖	Flint				*	.50				T.						.01		*	.18	.20		T.	T.	1.80								2.71
Athens‖	Oconee															.30	.38	.10	.67	1.22		.03	.07	.38	.88							4.03
Atlanta	Chattahoochee								.10	T.	.10					.36	.35	.01	T.	T.		.06	.62	.05								1.65
Augusta	Savannah					T.			.08		.05				.53	T.	.01	.46	T.	.02		.15										1.30
Bainbridge‖	Flint		T.		*	.07	.20	T.	*	.11	.06	05	*	.07	.75	.13	*	.93	.02			T.	.29	*	.08							2.76
Barnesville	...do																.64	.06		.45	.04		.42	.74								2.35
Blakely	Chattahoochee							.67			.60		.18	.62			.23			T.		.30	T.	.83	.11							3.54
Brunswick	Altamaha	.92				.62				.15				1.98			.35	.50	.25	.40			1.04									6.21
Butler‖	Flint					*	.58									*	2.12	2.26	2.22	.83	.22	*	.14	.23	.91							9.51
Camak‖	Savannah								*	.28	T.	.20			*	.43	.10	.20	*	2.20												3.41
Canton	Coosa															.13		.25	.10				.48									0.96
Carlton‖	Savannah									*	.34					.22	.45	.10	1.74	.83		*	.25	.07	.07							4.07
Carrollton‖	Chattahoochee																															
Clayton	Savannah			T.	T.	T.		T.		.39	.13					1.48	T.	.45	.09	.10		.40	2.20	.81								6.05
Columbus‖	Chattahoochee														*	.03	.60	.55		*	.04	*	.39	.02	.94							2.57
Covington‖	Ocmulgee							*	T.							*	.65	T.	.35				.21	.15	.10							1.46
Cuthbert	Chattahoochee															*	1.29								21							1.50
Dahlonega	...do					*	.15	.02	T.	.36	.20					.03	.82	.12	.10	.05		.01	.78	1.88	.01							4.53
Diamond	Tennessee				.04	T.		.13	T.		.24		.36		T.	T.	.92	T.		.01		T.	1.10	.27								3.07
Douglas	Satilla																															
Dublin‖	Oconee	T.					T.	T.	*	.70			T.	*	.26	.92		.28	.38	.16	.86					T.						3.56
Dudley	...do					.16	.21		.50	.10				T.	.54	T.		.51	.65	.17	.05	T.	T.									2.89
Eastman‖	Ocmulgee						.22		*	.90	T.	T.			.14	.08	.18	.92	.09	1.07	.13											3.73
Entonton	Oconee						.08								.21		.41	.57	.09	.04				.16								1.56
Elberton	Savannah								.08	.05						.69	.45	.15	1.50	T.		.20	.52	.08								3.72
Experiment	Chattahoochee										T.			T.	.04	T.	.43		.16	.06			.28	T.	.06							1.03
Fitzgerald	Allapaha								.32	.32			.02		.42	.01	.26	.57	.03	.03												1.98
Forsyth	Ocmulgee						.12									.10	2.00	.02	1.65	.20	.01											4.10
Fort Gaines‖	Chattahoochee					.30	.07	T.						T.	T.		T.	.50				*	.10	.15	T.							1.22
Gainesville‖	...do							*	.18	*	.16					.06	.05	.25	*	.10		*	.46	1.15	.99							3.40
Gillsville	Oconee							T.								1.63	.07		.40	T.		T.	T.	1.06	.38							3.48
Glennville‖	Altamaha	.65					.13		.18	T.		T.	.68	*	1.18	.81	.03	T.	T.	.43	.04	T.	T.		.70							4.83
Gore	Coosa				.06	.03		.12	.82		.51									.07		.02	.24									1.87
Greensboro‖	Oconee														*	T.	.30	1.43	.09	.40			*	.56								2.78
Griffin‖	Chattahoochee									*	T.	T.			.05	T.	.80	.05	.56	T.	.05	T.	.30	*	.20							2.01
Harrison	Ogeechee					.14			.06				.45		.90			.90	1.55	.20												4.20
Hartwell	Savannah								.43							1.41	.09		2.17		.84				.97							5.91
Hawkinsville‖	Ocmulgee								*	T.	*	.45	*	.06	.40		*	.96	.84	.08			.02	*	T.	T.							2.81
Helena	...do						.06			.05	.08	.03	.21	T.	.05	T.	T.	.45	.63	.07	T.		.03										1.06
LaFayette	Tennessee				.44	.19			.47		.35					.13	.04					10	.43										2.15
Lisbon	Savannah									.46						.20	.02	1.80	.12		.01	.15		.08									2.84
Lost Mountain	Chattahoochee								.02		.10						.05		T.	.02		T.		.47									0.66
Louisville	Ogeechee										.06		.22		.40		.35	.38	.24				.15										1.80
Lumber City	Ocmulgee						.08		*	.70	.08	.01	.42	.08	.08	T.	T.	1.70		*	T.		*	.18		.36							3.69
Lumpkin‖	Chattahoochee				T.	T.										T.		T.		T.		T.	2.10	.26								2.36
Macon	Ocmulgee				.06	T.	.08		.23		T.	.07	.01	T.	T.	.08	1.56	T.	.03	.04		T.	.01	.30									2.47
Marshallville	Flint		T.				T.			.15	.07			.23	T.		1.60	.85	.08	.32	T.	T.	.07	.34	.07							3.78
Mauzy	Suwanee					.02	.25	.08						.29	.53	.40		.28				44											2.29
Milledgeville‖	Oconee						.02			.08				.24		.07	*	.24	.09	.27	.03		.01	.27	.09	.01							1.42
Millen‖	Ogeechee							*	.10	.30	*	.48	*	.70	*	.20	*	.15	*	1.25	1.00												4.18
Montezuma‖	Flint	*	.28			*	.20		*	.24			*	.28	.22		1.52	.14	*	.32	*		.28	.08	.44								4.00
Monticello‖	Ocmulgee						.05	*	.02		*	.35	*	.16	*	.08	.21	.18	*	.59	.05	.03	.12	.08	.09								2.01
Morgan	Flint	.12			.08	.30	.08		.13	.10	.13		.11	.10	.08							10	T.										1.33
Newnan‖	Chattahoochee										*	.10				*	.25	T.	.25	*	.30	*	.08	*	.37								1.35
Oakdale‖	...do									*	.16						*	.05		.03			*	.31	1.00								1.55
Point Peter	Savannah									.17					T.	1.35	.10		1.69			16	.25	.18									3.90
Poulan	Suwanee					.04				.08	.13		.07	.25		.02	.09	.10		.10		.41											1.29
Putnam	Flint												.50		.10	2.00	1.30		.10	.60					1.90								6.50
Quitman‖	Suwanee					*	.15					.55	*	.17	T.	.21	*	.45		*	.11	*	.19			.19								2.02
Ramsey	Coosa				.07	T.			.10		.52					2.00						T.	.10	1.15									3.94
Resaca‖	...do				T.	.70			.40	.15	T.							T.		.05		T.	T.	.10	T.								1.40
Rome‖	...do					*	T.	*	.04	T.	.30	.18	*	T.			*	T.		*	T.	*	.12	.04									0.68

TABLE 2.—*Daily precipitation for September, 1909. District No. 2*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Georgia—Cont'd.																																	
St. George	St. Marys		T.											.41	1.10		.11	.35														1.97
St. Marys	do					.39			.09	.08		.72		1.47	1.87				.08	.17	.62	.04	T.		.20								5.13
Savannah	Savannah						.09	T.	.30	T.		T.	.14	1.31	.45	.16	T.	.81	1.11	.33		.26											4.90
Statesboro	Ogeechee						1.20			.18			1.05	.32	.40	T.	.18	.10	T.	.34	.03	.16	T.		.01								3.97
Talbotton	Chattahoochee																																
Tallapoosa‖	Coosa															T.	.70	.70					•	1.40	T.	.10							2.90
Thomasville	Ocklockonee	.27				T.	T.		.68	.01		.58	.30	.01	.01	.09	.69	3.13		T.		.31	T.			.01							6.07
Toccoa‖	Savannah								T.	.44	.32				•	1.55	2.00	.49	.04	.18		•	.35	.35	.44								6.16
Valdosta‖	Suwanee					•	1.30						•	.25	T.	1.82	.62					•	1.45		•	.25							5.69
Valona	Ogeechee					.10	.14			.20	.25		.15	2.00	1.01			.60		.18	.75		T.										5.38
Washington‖	Savannah									•	.29	T.			•	.10	.02	.40	.04	.16	.07	.04	.05	.05	.08								1.30
Waycross‖	Satilla	.01					.30	.60		•	.20		.06	•	.16	.97	.09	.02	.02	.01	.03												2.47
Waynesboro‖	Savannah								T.			T.	•	.15	•	.30	.10	1.70	.50	.45		T.											3.20
West Point‖	Chattahoochee									T.					•	T.	T.	T.	•	.04	.18		.02	T.	T.								0.24
Woodbury‖	Flint																		•	.87		•	1.78										2.65
Florida.																																	
Apalachicola	Coast						T.	.44				.49	.09	1.28	.64					T.	T.	1.90		.02				T.					4.86
Arcadia	Peace Creek	.75	.01						.02	.36	.04	T.	.06		.65		.01		.04	.06	.04	.10		.15	.25	.11	T.						2.05
Archer‖	Waccasassa																																
Avon Park	Kissimmee	T.	.01	T.					T.	.78			.16	.07		.18	T.		.57	.18	.04		.04	.10	.22	.04	T.	.03					2.42
Bartow	Peace Creek				.12				T.				.08	.05	.01	.22	.61		1.18	.62	.38	.04	.33		.22	.72		.05					4.01
Blountstown	Apalachicola				.25	.32	.75														1.00											2.32
Bonifay	Choctawhatchee	T.					T.										1.30	.20	.80			1.00	1.20									4.50
Brooksville	Withlacoochee		.66																.33							1.10						2.09
Carrabelle	Coast					.40	.75	.20				.25		2.04	.20	.10						1.00											4.94
Cedar Keys	do		.04						.48						.44		.49															1.45
Clermont	Lake			.16								1.22							.25	.13	.05				.10	.42							2.33
De Funiak Springs	Choctawhatchee					.03	.05			.03	T.		T.	T.	.26	1.03	T.		.30		.31	.75		1.03									3.79
De Land	St. Johns	T.	T.	T.					T.	.01	T.		.55	.05						.30		.40			.20	.47	1.23	.09					3.30
Eustis‖	Lake								.18				.37			.15		T.		.05						.15	.04						0.94
Federal Point	St. Johns											.32		1.18	1.89	.01										3.64	.05						7.09
Fenholloway	Fenholloway			1.50	1.00												.75	1.00															4.25
Fernandina	Coast	T.					1.55	.02				.09	.10	1.60	2.90						.02		.03			T.							6.31
Flamingo	do																																
Fort Meade	Peace Creek			.88						T.			T.	T.	.22	T.	T.		.42	T.	1.68			.26	.35		.13						3.94
Fort Myers	Caloosahatchee	.14		T.					T.	T.			.90	.30		.14	T.	.23	T.		T.	2.13	.35	T.	.38	.43	.07				T.		5.07
Fort Pierce	Indian	.12											.47	.70	.20	.06	.03		.16	.26			T.		1.95	•	3.18	.26			T.		7.39
Gainesville‖	Lake	.03		.75			T.						T.	.02				.02			T.	.58				.06	.02						1.48
Grasmere	do	T.	T.	1.06					T.	.05			.10	.83	.05				T.	.15	.02	.21	.01		.05	.80							3.33
Hilliard	Nassau											.05	.35	.50	1.00	.03				.22	.02											2.17
Huntington	St. Johns														.20				.15	.10	.30				.05	1.80	.03						2.63
Hypoluxo	Lake		.11										.03	.52	.63	.15	.08		1.65	5.90	.24		.11		1.36	.46	2.52	.11	.12		3.87		18.16
Inverness‖	Withlacoochee											.68	.28																				0.96
Jacksonville	St. Johns						.35		T.	.04		T.	.22	1.98	1.50		T.	T.	.01	T.	.27		T.			.38	.23							4.98
Jasper	Suwanee							1.10				.30			1.05																		2.45
Johnstown	do													.20				.35								.90							1.45
Jupiter	Coast	.45				T.			T.		T.	.08	2.67	.60		.01	T.		.38	.23			.01	.80	.58	.57	.50			.02	.69		7.59
Key West	do		.64					T.	.23	.67				.64	T.	.06	.06	.78	1.05		.10	.02		.06	.04	T.	1.13	.30	.69	.28			6.35
Kissimmee	Kissimmee	T.		.31						.36			T.	.20		T.			.40	T.	.21	T.	.10	T.	.35	.72	.22	.06					2.93
Lake City‖	Suwanee						.13	1.96					T.			.18		T.	.08														2.35
Live Oak	do																																
Macclenny	St. Marys		.60										.32	.58	.13																		1.63
Madison‖	Suwanee						.46	.04						.39	.04	.65		.17				.03	.33											2.11
Malabar	Indian												.84	.76	.15	.01	.07	.11	.24	.08		.03	.03	.65	.24	.05	1.10	.14			.02		3.92
Manatee	Manatee		.07	1.30					.07	.74		1.19	.19	.24	.09			.04	.13			.12	.05			.01							4.24
Marianna‖	Apalachicola					.08	.11								.07			1.36				.17	.47		1.36							3.62
Merritts Island	Indian												•	1.42	.29	T.	.25	T.	.75									2.27				4.97
Miami	Coast	T.	.65							.30		T.	1.05	.95		T.	.31	2.00	.91	1.40				T.	.96	.80		1.30	.25	.30	2.75		13.93
Middleburg	St. Johns																																
Molino	Escambia	.10						.40		.32			.17	.43	.40		.10		.43		•	1.35	.55										4.25
Monticello	Aucilla						1.30								1.31		1.17	.26				.45		.08									4.57
Mt. Pleasant	Apalachicola					.30	.38					.15	.05	.15	T.		.30	.81	.03		.05	.37		.79									3.38
Newport	St. Marks				.56	.50	.60							T.	T.	T.	T.	T.				T.		T.	T.								1.66
New Smyrna	Coast											.42	.76	.58		.65		.16			.14		.06	2.55	1.08	.86	.02						6.68
Ocala‖	St. Johns			T.										1.12	T.		.03	T.	.24	T.	.65	T.	.13		.03		.73	.17					2.50
Orange City	do												.53	.03								.28			.16	.67	.40						2.07
Orlando	do	T.							.05	.25			.47	T.	.67	.26	.06		.30	.36	.22			T.	.67	.10	T.						3.41
Pensacola	Coast	.58			.08	.05	T.		T.			.07	T.	T.	.33	T.		T.	T.	T.	1.00	T.		.14									2.25
Plant City	Hillsboro																		.55				20										0.75
Rockledge	Indian											1.52		.80		.05				.94		.06	T.		.97	.38	.87						5.59
Rockwell	Withlacoochee	T.	T.				T.		T.	T.		T.	.60		.25		T.		T.			T.			.70							1.55
St. Andrew	Coast						.09	.04	.02	1.00	.05	1.11	.29				.54		.40		1.03		.19										4.76
St. Augustine	do		.08							.22				.75	.30	.25			.54						T.	2.61	.13	T.					4.88
Sand Key	do		.04	.70			T.	T.					T.		T.	.01	.47	.08	.01		T.		.41		T.	.02	.48	1.74	.08	T.			4.04
St. Leo	Withlacoochee	.08	T.							.14		.02	1.31		T.		.04	T.	.07	.12		.23				.57							2.58
Satsuma Heights	St. Johns		.12	T.								T.		.84	1.84	.19	T.		T.		.17		.12			1.07	T.						4.35
Switzerland	do		.35	T.							T.	1.06	2.40	.55	.92	.13							.02	.03	.80	1.03							7.29
Tallahassee‖	Ocklockonee						.05	.85		.05	.02				.45	1.05			.28				.73	.14	.85			.25					4.72
Tampa	Coast	.36	.28	.78						.19	.01		.34	.03	.04				.13	.01		.12			.01								2.30
Tarpon Springs	do	.15					.61			.25	.46	.03	.18	.05	1.07	.57		.72		.11					.08								4.28
Titusville‖	Indian			.35							.35			.78	1.20	.10	.20		.03	.54	.06			.10	.55	1.05	.84						6.15
Wausau	Choctawhatchee	.49			.20	.04	.43		T.												T.	.64		.97									2.77
Alabama.																																	
Alaga‖	Chattahoochee		.58					1.02		T.			T.	.02	.24		.08		T.	T.	1.66		.02										3.62
Anniston	Coosa	.11		.01		.01		.02	.05	T.	.23				T.	T.	.11			.05	T.	.17	.43										1.19
Ashville	do	.31			T.	.74			.09	.01	.55								T.	T.	T.	.15	T.	T.									1.85
Auburn	Tallapoosa							T.	T.				T.			.07	.35	.02	.01	.01	T.	.35	.05										0.86
Benton‖	Alabama	.62	.16						.09			.18				.06	.42		.08		.11		.16	1.02									2.90
Bermuda	Escambia				T.				.93	T.	T.	T.	.09	.52	.08	.86	T.	T.			T.	.20	.04										2.72
Birmingham	Black Warrior	.94						.07	.10		.28				T.	T.	T.			T.		.19	.03										1.61
Boligee	Tombigbee																																
Calera‖	Coosa	.26	.80						.20	.22							.92		1.00	.50	.10		.85										4.85
Camp Hill	Tallapoosa							.37	2.00	.65										T.	T.					.02							3.04
Cedar Bluff‖	Coosa									.70						.40	.90							1.15									3.15
Citronelle	Alabama	.08	.05	.17	.01			.13	.90	.40	.01	.03	.08		.21	.08	.01				.60	1.69	T.	.47	.01								4.93
Clanton‖	Coosa		.11						.22	1.22					T.	.32	.07	.05		.04	.05	.03	1.10	1.08	.20								4.49
Cordova	Black Warrior								T.		.98									T.		.43	.48										1.89
Cullman	do				T.				T.		T.	.70				1.16	.03			T.		.79	.67	.19									3.54
Dadeville‖	Tallapoosa								1.01	1.49				.85							T.	.12	.80										4.27
Daphne	Coast	T.	T.				.70			1.75			.32	.28	.30	T.	T.	.15	.31	T.	1.52	.61	.50	.07									6.51
Demopolis‖	Tombigbee								1.64	.64												.50		.56									3.34
Double Springs‖	Black Warrior																																
Eufaula‖	Chattahoochee					.50				.17		.06		.02	.15	.12		.04	.12	.12	.08	T.	.28	.02	T.								1.68
Evergreen‖	Escambia	.06						.68		.06				.05	.08							.25		.30	.25								1.73

TABLE 2.—*Daily precipitation for September, 1909. District No. 2*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Alabama—Cont'd.																																	
Fayette	Tombigbee						.05	.03	.05				.70	.05	.15	.05	.45					.80	.40	.05									2.78
Flomaton	Escambia							.03	.08	.11					.35	.29		.10					.38	.09	.28								1.71
Fort Deposit‖	...do										.44	.50				T.	.04	.60			.04		.14	.70								2.46
Gadsden‖	Coosa					T.	T.		T.	1.40	T.				T.		T.	.18		.55			.25	.18	.11							2.67
Goodwater‖	...do								.68	.15			.06				.02					16	1.28	.43								2.78
Greensboro‖	Black Warrior												.24		.21																	0.45
Greenville‖	Escambia										.80				.66	.06						33										1.85
Hamilton	Tombigbee								.37		.10	T.		.26				.04				.94	.15	T.								1.86
Highland Home	Escambia								1.92							.04						70										2.96
Livingston‖	Tombigbee	.30							.83		.18				.25							20		.31								1.77
Lock No 4‖	Coosa															.04																
Lucy	Chattahoochee	.52			.41	.08	.02	.55	.20					.46	.07		.20	.02	T.	T.	T.	34			.14								3.01
Maple Grove	Coosa			T.	.03			T.			.39		T.		T.	T.	.29			T.		09	.28									1.08
Mentone‖	...do					T.	T.		.52							T.	T.						.15									0.67
Milstead‖	Tallapoosa		.87						.08	.62								.08	.82				.22	.24	.10							3.03
Mobile	Coast	.03				T.			.36	T.	.10	.02	.04	.24	.07	T.	1.87		T.		1.07	1.39	.11	.12								5.42
Montgomery	Alabama	T.		T.				.08	.11		.31			T.		.22	.21			.01		.39	T.	.26								1.59
Newbern	Black Warrior	.57						1.94	.90		T.	.12	.05	.02	.03	.05				T.		1.77	.37	.20								6.02
Oneonta	...do			T.					.02		.86				T.	T.				12	.03	.07										1.10
Opelika‖	Tallapoosa								.07	.05				T.		.12		.73	.14	.18	T.		.12									1.41
Ozark‖	Coast						.20	T.		.80		T.			T.			T.					.90		2.30							4.20
Prattville	Alabama	1.25			.14						45			.12	.08		.61	T.		T.		22		T.								2.87
Pushmataha	Tombigbee	.03	.05		T.				1.59	.57		.08	.33		T.	.43	.17					1.10	.05									4.40
Selma‖	Alabama	.08							T.	.06					.02	.18	.02	.14	.32				68	1.72	T.							3.22
Spring Hill	Coast																															
Talladega	Coosa							.20							.10		.20	.20				.07		.10								0.87
Tallassee‖	Tallapoosa								T.	.14					T.				T.		.07		.08		.27							0.56
Thomasville‖	Tombigbee	.42	T.						T.	T.					10			T.				75	1.35	.10	.10							2.82
Troy	Escambia							.34	.05		.03		.12		.02		.36	1.26		.07		39	.53									3.26
Tuscaloosa‖	Black Warrior		T.									.01				.08					T.	.04	.67	2.38							3.18
Tuskegee	Tallapoosa		.09						.04	.05								1.02	.22	T.	T.											1.42
Union Springs‖	...do								.61	.85				T.	T.	.15	T.	4.15			T.		.10	2.20								8.06
Uniontown	Black Warrior								1.03						T.	T.	.03			T.		.93	.48	.68								3.15
Valley Head	Coosa					T.					.60					.10						.50										1.20
Vienna‖	Tombigbee																															
Wetumpka‖	Coosa								T.	.10							T.		.21	.47	.10			1.51	.15							2.54
Mississippi.																																
Aberdeen‖	Tombigbee																T.					65	.10									0.75
Agricultural College	...do	T.					T.	T.							1.68					T.		1.10										2.78
Bay St. Louis	Coast										.01			.29	.03	.02	1.18			T.	4.00	2.48		.04								8.05
Biloxi	...do	.19									.02	.10		.01		.21	.31		.03		*	4.80		.05								5.72
Booneville	Tombigbee			T.	.09	.08		1.01			.88				.44							1.21		.01								3.72
Brookhaven‖	Pearl		.07	.05				.80		T.		.29			.01		.05					4.30										5.57
Columbia‖	...do	.12		T.				.16	T.	.21	.07		1.42		1.27	.11	.02					3.76										7.14
Columbus‖	Tombigbee		T.							.03	T.					.21	.33					.56	.04	.08								1.25
Crystal Springs‖	Pearl							.10				.06			.19							3.20	.06									3.61
Edinburg	...do						T.	.10			T.	.31		.27	1.18					T.	.02	1.67		.01								3.56
Enterprise‖	Chickasawhay		.08	.04			.80			.35		.28			T.	.10	.16					2.25		.03								4.09
Fulton	Tombigbee					2.48			1.20			.74										30	.08	.02								4.82
Hattiesburg‖	Leaf	.10						.92		.12				.54	.86							3.10										5.64
Hazlehurst‖	Pearl								.22			.03			2.35		.09					2.45	T.									5.14
Jackson	...do					T.	.30				.03	.04		.03		.04					.21	2.66										3.31
Lake‖	...do	1.37						.19		.01		.11	T.			T.						1.28										2.96
Lake Como	Leaf						1.28	.50		.08				T.		T.				.31	1.70											3.87
Laurel	...do	.04					T.	T.	T.	T.		T.		.35	1.15	.18	.29			T.	.21	2.15		T.								4.37
Leakesville‖	Chickasawhay	1.69								.38												*	2.98									5.05
Louisville	Pearl															.97			.07	.13		1.15										2.32
McNeill	...do	T.	T.				1.78		.25	.15	.12		T.	.16	.05						4.75	1.23										8.49
Macon‖	Tombigbee								.26								.36				.06	.62	.02									1.32
Magnolia	Pearl		.02				.05		.82		.29		.07	.08		.17					1.75	1.85										5.10
Meridian	Chickasawhay						.36	.04	1.36		.14	.22		T.	1.78	.70			.01	.02	.05	1.50										6.18
Merrill‖	Pascagoula	.24		.24						.20					1.00							3.00	.40									5.08
Monticello	Pearl	.04				.28	.01		.62	.01	.23			.08							1.10	3.09		T.								5.46
Okolona‖	Tombigbee								T.		.55	.16				.35	T.					1.10	.09									2.25
Pascagoula	Mississippi Sound																															
Pearlington	Pearl	T.					.21	.32		T.			.17	.40	.22	.05	.79				2.95											5.11
Porterville	Tombigbee																															
Shubuta‖	Chickasawhay		.58	.78							.86	.02			.16	.40						1.56										4.36
Waynesboro‖	...do	.20	T.				T.	T.	T.	.58		.28		.55	.44	.28	T.				T.	2.00		.20								4.53
Woodland	Tombigbee	.08						1.34				.10				.15						1.50										3.17
Louisiana.																																
Pearl River	Pearl	.06						.24		.08	.30	T.	.12	.30	.90	T.		.50		.40	.20	4.20	.08									7.38

*Precipitation included in that of the next measurement.
**Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
†Also on other dates.
‡Data are from standard instruments not supplied by the U. S. Weather Bureau.
§Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖Estimated by observer.
¶Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 2, South Atlantic and east Gulf States.*

Date.	Virginia.										North Carolina.													
	Lynchburg.		Norfolk.		Richmond.		Saxe.		Charlotte.		Eagletown.		Fayetteville.		Hatteras.		Newbern.§§		Raleigh.		Reidsville.		Salisbury.		Wilmington.		Charleston, S. C.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	86	60	83	67	85	62	90	57	85	55	.....	.....	88	58	78	70	86	55	85	55	90	54	83	56	84	74	90	72
2	88	58	86	58	88	60	91	61	88	61	.....	.....	90	60	82	72	88	58	88	58	91	61	88	58	88	74	90	72
3	88	60	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
4	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
5	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
6	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
7	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
8	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
9	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
10	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
11	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
12	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
13	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
14	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
15	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
16	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
17	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
18	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
19	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
20	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
Mns	76.3	57.1	76.0	63.4	75.9	59.0	78.2	56.1	77.6	60.5	.....	.....	81.4	60.2	77.6	68.1	82.1	59.7	77.5	59.9	79.2	57.8	79.9	57.7	78.8	63.2	79.9	68.7
21	86	58	86	62	86	62	90	57	85	55	.....	.....	88	58	78	70	86	55	85	55	90	54	83	56	84	74	90	72
22	88	58	86	58	88	60	91	61	88	61	.....	.....	90	60	82	72	88	58	88	58	91	61	88	58	88	74	90	72
23	88	60	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
24	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
25	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
26	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
27	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
28	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
29	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
30	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
31	88	62	86	62	88	62	91	62	88	62	.....	.....	90	62	84	72	88	60	88	60	91	62	88	60	88	74	90	72
Mns	76.3	57.1	76.0	63.4	75.9	59.0	78.2	56.1	77.6	60.5	.....	.....	81.4	60.2	77.6	68.1	82.1	59.7	77.5	59.9	79.2	57.8	79.9	57.7	78.8	63.2	79.9	68.7

Date.	South Carolina.										Georgia.													
	Columbia.		Conway.§§		Georgetown.		Greenville.§§		Newberry.		Society Hill.		Trial.		Adairsville.§§		Albany.§§		Atlanta.		Augusta.		Dahlonega.		Macon.		Savannah.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
2	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
3	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
4	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
5	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
6	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
7	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
8	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
9	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
10	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
11	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
12	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
13	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
14	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
15	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
16	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
17	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
18	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
19	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
20	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
Mns	82.1	63.8	82.5	63.5	80.8	65.0	77.3	60.6	82.6	62.0	78.6	61.6	84.3	62.6	80.1	60.0	81.3	66.9	79.7	63.7	83.0	65.3	77.7	60.2	83.5	65.1	80.8	67.9
21	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
22	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
23	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
24	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
25	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
26	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
27	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
28	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
29	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
30	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
31	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66	96	66
Mns	82.1	63.8	82.5	63.5	80.8	65.0	77.3	60.6	82.6	62.0	78.6	61.6	84.3	62.6	80.1	60.0	81.3	66.9	79.7	63.7	83.0	65.3	77.7	60.2	83.5	65.1	80.8	67.9

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 2*—Continued.

Date.	Georgia.						Alabama.														Florida.					
	Thomasville.		Waycross.‡‡		West Point.‡‡		Anniston.		Bermuda.		Birmingham.		Eufaula.‡‡		Mobile.		Montgomery.		Tuscaloosa.‡‡		Uniontown.		Avon Park.		Fort Myers.		Gainesville.‡‡	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	94	68	96	70	91	69	89	66	91	69	88	66	92	67	92	70	93	72	96	69	94	66	88	73	87	74	90	71
2...	93	69	89	71	87	64	87	58	93	68	89	64	91	66	93	74	93	68	93	66	93	66	90	70	89	75	93	72
3...	89	68	92	64	89	62	84	68	94	76	89	69	89	66	93	75	93	67	94	66	94	66	89	72	88	74	87	71
4...	91	65	92	60	88	65	83	70	93	71	86	73	91	7C	91	76	92	72	94	62	95	70	87	67	85	71	86	66
5...	95	70	97	67	93	70	88	69	95	71	88	69	91	69	95	76	95	73	95	62	95	70	89	64	85	68	90	67
6...	91	70	91	68	87	72	86	66	94	70	89	67	88	70	93	75	91	71	94	63	94	70	89	66	87	68	91	71
7...	88	70	93	69	90	68	88	69	94	72	91	70	87	68	91	76	93	71	97	63	95	71	91	67	89	68	89	71
8...	92	71	94	70	90	71	87	73	94	71	86	71	87	69	91	74	93	72	98	70	93	72	93	72	88	72	92	73
9...	88	71	92	71	87	70	89	72	90	71	88	70	87	70	92	74	88	71	94	72	88	73	89	73	87	75	90	73
10...	91	69	93	67	86	70	85	68	90	70	88	69	86	69	93	74	90	72	92	72	92	72	90	74	88	73	91	70
11...	92	69	96	73	95	68	90	66	95	71	91	71	91	70	93	75	93	72	92	70	94	69	90	71	89	72	89	70
12...	89	68	90	70	89	67	88	68	93	68	92	71	88	68	92	74	91	71	97	70	93	69	90	72	82	72	88	73
13...	84	70	87	71	86	69	85	70	88	68	86	71	85	70	89	71	85	70	91	68	87	70	92	71	87	70	89	71
14...	84	69	88	71	86	71	83	71	83	68	86	70	84	70	86	73	88	71	89	70	88	69	92	72	88	71	91	72
15...	91	69	90	71	87	73	86	70	90	67	83	70	83	69	89	74	91	71	91	72	90	69	89	74	89	75	89	72
16...	91	71	92	70	90	70	83	67	89	69	86	69	86	68	89	72	88	70	88	70	89	69	90	74	88	74	91	72
17...	89	70	93	71	87	70	86	65	88	69	86	66	82	69	89	71	85	70	91	65	92	68	90	74	88	74	91	71
18...	88	70	93	71	88	68	88	67	91	69	89	68	84	68	91	74	87	71	91	68	90	69	88	75	87	72	93	73
19...	88	72	88	71	80	70	83	71	88	71	85	70	83	69	87	75	84	71	93	68	87	71	83	73	87	74	89	74
20...	83	71	82	69	79	69	78	67	79	73	81	71	80	70	81	72	80	73	90	72	82	71	87	74	88	74	85	74
21...	86	71	92	69	82	69	79	68	88	72	81	71	83	69	86	73	87	73	89	72	86	73	90	73	88	73	91	71
22...	91	70	94	71	92	69	85	69	89	74	87	72	85	70	86	76	86	71	93	72	91	74	90	71	87	74	90	72
23...	90	71	95	67	94	72	88	64	81	64	86	62	86	70	91	71	90	68	88	69	89	71	86	74	86	73	89	70
24...	86	70	93	64	83	62	78	57	93	60	75	55	81	63	80	65	79	62	82	57	86	59	83	74	84	73	89	71
25...	80	65	81	65	79	61	77	54	82	57	78	54	78	62	80	61	78	59	80	56	79	56	86	73	86	74	75	69
26...	77	58	79	61	77	52	76	51	81	54	75	51	76	51	78	61	76	53	80	50	77	54	79	72	76	72	75	64
27...	76	57	78	61	74	50	69	50	75	53	69	48	74	53	74	59	70	52	70	50	73	51	82	69	82	69	77	65
28...	73	49	77	50	75	45	73	40	77	44	73	44	73	47	75	52	73	48	70	44	76	43	83	65	80	67	77	58
29...	78	45	83	41	82	42	78	40	82	43	78	46	75	42	78	55	80	49	80	44	81	48	83	64	80	67	82	57
30...	84	50	87	46	88	44	82	44	85	45	82	52	80	43	82	57	83	50	85	44	84	49	83	70	79	69	83	59
31...																												
Mns	87.1	66.5	89.5	66.0	86.0	64.7	83.4	63.3	88.2	65.6	84.4	64.7	84.2	64.8	87.3	70.2	86.5	66.8	89.2	63.9	88.0	65.6	87.7	71.1	85.8	71.9	87.4	69.4

Date.	Florida.																Mississippi.							
	Jacksonville.		Jupiter.		Key West.		Miami.		Orlando.		Pensacola.		Tallahassee.‡‡		Tampa.		Columbus.‡‡		Hattiesburg.‡‡		Jackson.		Meridian.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	91	72	91	74	87	77	94	74	89	74	87	70	91	72	86	71	96	69	98	69	97	69	93	68
2	89	76	84	74	88	73	89	74	90	70	88	74	92	71	92	70	93	65	99	68	97	71	91	68
3	84	73	87	78	87	75	89	78	87	71	87	74	89	69	90	73	94	66	98	69	97	72	94	71
4	85	69	84	76	86	77	88	75	85	65	87	77	90	68	86	71	98	71	97	68	98	70	94	72
5	89	70	85	71	86	74	89	70	89	64	91	77	92	70	89	68	93	69	100	70	97	70	91	71
6	85	72	85	71	87	74	92	78	89	67	88	75	89	71	90	73	95	67	97	71	96	71	89	70
7	87	72	88	74	88	74	91	70	90	65	87	77	87	70	89	71	97	65	99	71	96	71	94	70
8	87	74	88	75	88	76	92	73	90	74	88	76	89	72	92	74	97	70	98	73	97	72	92	70
9	86	75	89	78	87	77	90	75	86	72	85	75	85	71	90	74	97	71	95	72	98	72	88	70
10	89	72	89	78	88	77	91	74	88	72	87	74	89	70	91	73	91	73	95	72	101	73	88	69
11	87	73	88	72	88	76	90	72	91	69	88	75	91	71	90	73	98	69	98	70	98	70	93	69
12	84	72	85	71	88	77	80	73	83	71	88	73	88	69	88	72	98	69	98	69	99	70	92	70
13	83	70	85	70	87	75	89	78	84	70	84	73	82	70	90	72	93	72	92	68	91	72	86	71
14	81	72	87	79	88	78	89	79	85	72	82	72	80	71	92	73	89	69	92	66	95	70	82	67
15	85	73	87	80	88	76	90	79	86	72	84	74	86	69	91	74	92	69	92	68	93	69	88	68
16	87	73	87	79	86	76	87	76	88	74	86	72	87	70	91	73	88	67	83	70	84	70	84	70
17	87	73	87	79	81	73	89	76	88	72	85	70	86	71	90	73	91	62	94	67	91	63	86	65
18	88	74	83	73	86	73	84	71	85	75	86	74	86	71	89	74	94	62	95	65	97	60	90	65
19	86	76	81	72	86	79	87	74	85	74	85	75	85	72	86	74	90	65	90	67	93	70	85	70
20	84	72	86	79	86	77	87	76	85	71	82	73	83	72	88	74	82	70	78	74	78	70	78	71
21	89	74	88	78	88	76	90	73	90	71	84	81	81	72	88	73	86	71	90	70	86	70	87	70
22	86	75	87	75	86	75	89	74	90	71	86	80	86	71	91	73	92	71	94	74	93	73	90	75
23	86	70	86	72	87	73	90	73	87	73	88	72	87	72	89	72	81	69	94	70	81	66	86	65
24	86	71	82	73	86	73	86	73	85	74	82	66	84	71	90	73	79	53	84	60	76	54	74	56
25	73	67	86	74	88	75	85	72	85	74	81	65	79	67	88	71	79	50	80	59	78	54	77	58
26	71	63	82	72	81	72	86	73	77	69	77	62	76	58	81	68	82	46	70	58	76	52	75	54
27	74	63	83	72	83	76	86	71	80	67	76	58	73	59	78	67	73	49	75	52	70	49	68	51
28	72	56	81	72	79	72	80	72	82	63	75	54	71	54	82	63	78	43	76	45	74	45	71	43
29	76	58	84	77	80	75	85	74	81	61	75	59	76	53	84	60	81	40	80	44	82	42	78	44
30	78	59	79	75	88	75	89	74	84	65	80	59	81	57	85	68	88	43	81	46	86	45	82	46
31																								
Means	83.8	70.3	85.5	74.8	86.1	75.2	88.1	74.1	86.1	70.1	84.3	71.2	84.7	68.1	88.2	71.3	89.5	63.2	90.4	65.5	89.8	64.8	85.5	64.9

Climatological Data for September, 1909.

DISTRICT No. 3, OHIO VALLEY.

FERDINAND J WALZ, District Editor.

GENERAL CLIMATIC CONDITIONS.

Climatic conditions over this district during the past month were noteworthy mostly for the unseasonably cool weather which prevailed the first and last weeks of the month, the great variability in the distribution of rainfall, and the absence of rain over nearly the entire district during the last six days. Rainfall, in the main, was below normal, but over limited areas here and there, it was considerably above the average. The most important incident of the month was the passage of the tropical storm over the western part of the district the 21st-22d. This storm was attended by some very high winds and locally excessive rainfalls with consequent damage.

TEMPERATURE.

Beginning at the southern border of the district, or the northern portions of the Gulf States, and extending over the southern and central portions of Tennessee, the temperature averaged less than 1° below normal. Similar temperature conditions prevailed in southern Indiana, extending across the Ohio River into a small portion of Kentucky, also over small areas in West Virginia. Over the upper Green River section of Kentucky, the Scioto River Valley of Ohio, and the upper Wabash section of Indiana, the temperature was from 3° to 4 below normal, while the only section where the temperature averaged above normal was in the extreme southwestern part of New York. Over the rest of the district, the temperature averaged about 2° below normal. In West Virginia the temperature averaged the lowest for any September on record, although the extremes of temperature were well within the previous records. In Kentucky and the bordering territory of other States, except Indiana, the temperature for September averaged lower than nearly any other September for the past twenty years.

Frost occurred during the first week in nearly all the central, northern, and eastern States of the district; and, in the period 27-29th, light to killing frosts occurred in practically all parts of the district, with freezing temperature at many places. On the 28th ice formed as far south as Tennessee and a temperature as low as 29° was reported from the northwestern portion of North Carolina. The warm periods were the 9-15th and the 18th-22d.

PRECIPITATION.

There were four distinct rain periods during the month; namely, the 3d-5th, 9-10th, 15-16th, and the 21st-24th. Outside of these dates, there were only a few scattered rains, mostly light. After the 24th, there was no rain of consequence, except in the extreme northeastern portion of the district, where there were some general moderate rains on the 30th. The amount of rainfall which occurred during the month, as in August, was extremely variable, ranging all the way from less than half an inch to 9.8 inches. The areas over which the greater amounts occurred were widely separated. The heaviest rainfall for the month occurred in the upper sources of the Tennessee River in North Carolina, where the amount was 9.8 inches. Between 4 and 6 inches occurred in the central portions of Tennessee, the southern part of Illinois, the White River watershed of central Indiana, the Bluegrass section of Kentucky, and the upper watersheds of the Guayandotte, Monongahela, and Big Sandy rivers in West Virginia. Over the greater portion of Ohio and over the territory bordering the Ohio River of other States, the amount was less than 2 inches. The lightest amounts occurred in the western part of Pennsylvania and over a small area in the lower basin of the Great Miami River. Droughty conditions obtained to a moderate degree in Ohio, eastern Kentucky, and the territory of West Virginia and Pennsylvania bordering the Ohio River.

Rainfalls of 2.50 inches or more, in twenty-four hours occurred as follows:

Tennessee watershed: 4.20 inches at Rock House, N. C., the 20th-21st; 3.42 inches at Riverton, Ala., the 9-10th; 2.50 inches at Ashwood, Tenn., the 15th; 3.10 at Chattanooga, the 21st-22d, and 3.52 at Lynnville, Tenn., the 9-10th.

Cumberland watershed: 2.50 inches at Cedar Hill, Tenn., the 4th.

Licking watershed: 3.50 inches at Mount Sterling, Ky., on the 9th.

Wabash watershed: 2.70 inches at Albion and 3.37 at Flora, Ill., on the 9th, and 3.50 inches at Markle, Ind., the 22d-23d.

White River watershed: 3.40 inches at Columbus, Ind., on the 10th.

Great Kanawha watershed: 2.75 inches at Charleston, W. Va., on the 5th.

Guayandotte watershed: 3.60 inches at Logan, W. Va., on the 10th.

Monongahela watershed: 2.94 inches at Parsons, W. Va., on the 16th.

In addition to these twenty-four-hour heavy rains, the following heavy rainfalls occurred for short periods: 2.60 inches in two hours, at Lynnville, Tenn., the 9th, and 2.50 inches in fifty minutes, at Chattanooga, Tenn., on the 22d; 1.00 inch in forty-eight minutes, at Louisville, Ky., and 0.56 inch in fifteen minutes at Lexington, Ky., on the 9th, and 1.00 inch in forty-five minutes at Lexington, Ky., on the 15th.

The only damage from stress of weather during the month worth mentioning occurred in Tennessee, western Indiana, and in Illinois, the 21st-22d, in connection with the tropical storm before mentioned. There was some damage from lightning in Kentucky, Tennessee, Indiana, and Ohio, but nothing of consequence.

An earthquake shock was felt in Kentucky, Indiana, and Illinois about 3.45 a. m., on the 27th.

TABLE 1.—*Climatological data for September, 1909. District No. 3, Ohio Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New York.																				
Allegany	Cattaraugus	1,441	3	59.8	.....	92	14	31	29	48	3.73	.....	1.53	0.0	8	13	10	7	nw.	Charles E. Whitney.
Bolivar	Allegany	1,800	13	59.3	+ 0.6	92	14	29	29	51	3.22	+ 0.16	1.25	0.0	9	16	6	8	sw.	Lowell Andrus.
Franklinville	Cattaraugus	1,598	12	58.6	− 1.3	90	14	30	28	45	2.50	− 0.57	0.58	0.0	9	14	7	9	s.	John W. Kales.
Jamestown	Chautauqua	1,365	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Olean	Cattaraugus	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.50	.....	1.74	0.0	6	19	7	4	w.	John W. Alles.
Maryland.																				
Deer Park	Garrett	2,457	15	59.6	− 0.7	88	12	23	28	45	3.05	+ 0.76	1.90	0.0	5	.....	.....	.....	.....	S. P. Specht.
Grantsville	....do	2,351	15	57.8	− 3.9	80	13†	34	6†	36	2.70	+ 0.29	1.60	0.0	4	5	18	7	.....	J. S. Miller.
Oakland	....do	2,461	9	58.6	− 2.2	82	14†	27	28	40	3.56	.....	1.56	0.0	7	10	17	3	n.	R. E. Weber.
Pennsylvania.																				
Aleppo	Greene	1,135	8	63.8	.....	91	14	28	28	40	1.30	.....	1.20	0.0	4	20	8	2	nw.	J. S. Hinerman.
Baldwin	Butler	1,404	3	61.8	.....	88	13†	33	28	39	1.58	.....	0.60	0.0	6	12	10	8	w.	S. H. Templeton.
California	Washington	770	6	64.1[c]	.....	91[c]	14	35[c]	28	40	1.35	.....	1.35	0.0	1	24	5	1	w.	Prof. E. H. Knabenshue.
Claysville	....do	1,127	5	63.9	.....	92	14	27	28	44	1.47	.....	0.73	0.0	5	15	13	2	w.	E. T. Buchanan.
Derry Station	Westmoreland	1,172	12	64.4	− 2.1	92	14	35	6†	45	1.55	− 0.68	0.74	0.0	6	16	7	7	e.	D. M. Wineman.
Franklin	Venango	955	35	60.8	− 3.2	89	14	30	28	39	1.42	− 2.27	0.70	0.0	6	17	8	5	e.	Venango Water Co.
Freeport	Armstrong	772	31	.....	.....	.....	.....	.....	.....	.....	1.76	− 0.94	0.63	0.0	6	.....	.....	.....	.....	Mrs. A. R. Burtner.
Greensburg	Westmoreland	1,100	1	63.6	.....	88	14	34	28	37	2.28	.....	0.99	0.0	7	11	16	3	sw.	M. W. Crownover.
Greenville	Mercer	950	13	60.9	− 1.1	92	14	28	28	42	1.30	− 1.97	0.29	0.0	11	21	3	6	n.	A. M. Orr.
Grove City	....do	1,250	2	61.0	.....	88	14	27	28	42	0.91	.....	0.33	0.0	6	15	6	9	nw.	H. W. Harmon.
Indiana	Indiana	1,350	12	64.1[a]	+ 0.3	92[a]	14	33[a]	29	42[a]	2.22	− 1.41	1.08	0.0	7	12	12	6	s.	Rev. J. M. Welch.
Irwin	Westmoreland	884	12	64.0	− 3.2	90	14	35	25†	40	2.33	− 0.04	0.98	0.0	5	22	7	1	.....	J. B. Gallagher.
Johnstown	Cambria	1,184	21	.....	.....	.....	.....	.....	.....	.....	2.96	− 0.29	1.21	0.0	9	.....	.....	.....	.....	E. C. Lorents.
Lycippus	Westmoreland	1,420	17	64.0	− 2.8	89	14	36	28	34	1.77	− 0.87	0.38	0.0	7	.....	.....	.....	.....	Murray Forbes.
Pittsburg	Allegheny	842	39	65.1	− 1.0	87	13	39	28	31	0.76	− 1.72	0.31	0.0	8	13	11	6	n.	U. S. Weather Bureau.
Saegerstown	Crawford	1,116	18	59.9	− 2.1	89	13	29	28	41	2.18	− 1.58	0.75	0.0	12	4	17	9	nw.	J. G. Apple.
St. Marys	Elk	1,740	11	60.4	− 0.4	91	14	33	25	44	2.11	− 1.28	0.82	0.0	5	15	11	4	.....	Wm. E. Wittman.
Skidmore	Lawrence	1,000	5	62.8	.....	92	13†	26	28	46	0.80	.....	0.40	0.0	2	22	5	3	sw.	W. H. Stoner.
Somerset	Somerset	2,250	53	61.0	+ 0.4	89	14	31	28	41	2.41	− 0.70	1.51	0.0	2	6	22	2	se.	W. M. Schrock.
Uniontown	Fayette	999	21	64.4	− 1.6	87	14†	37	28	33	1.33	− 1.76	0.82	0.0	6	3	21	6	sw.	Wm. Hunt.
Warren	Warren	1,137	20	59.8	− 2.4	88	14	35	27†	39	1.68	− 2.10	0.48	0.0	7	21	0	9	se.	Anna Simpson.
West Virginia.																				
Abovale	Pocahontas	.....	1	58.5	.....	83	15	30	25†	39	1.96	.....	0.81	0.0	8	15	8	7	n.	W. E. Arbogast.
Bancroft	Putnam	.....	5	66.0	.....	89	13	37	27	39	1.77	.....	1.26	0.0	8	17	4	9	sw.	James Hill.
Beckley	Raleigh	2,440	10	62.8	− 0.2	83	13†	30	28	43	3.92	+ 2.22	1.98	0.0	7	17	7	6	w.	John A. Ewart.
Ben's Run	Pleasants	622	6	67.0	.....	90	14	39	28	33	1.32	.....	0.74	0.0	4	27	3	0	.....	J. D. Riggs.
Bluefield	Mercer	2,563	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent, N. & W. Ry. Co.
Buckhannon	Upshur	1,472	13	61.9	− 3.0	86	14	30	28	39	3.56	+ 0.68	1.49	0.0	5	24	5	1	.....	H. A. Darnall.
Cairo	Ritchie	667	7	66.3	.....	90	14†	32	28	43	1.43	.....	0.60	0.0	4	9	15	6	w.	Van A. Zevely.
Central Station[1]	Doddridge	900	9	59.6	.....	.....	.....	28	28	41	2.77	+ 0.02	.....	0.0	.....	.....	.....	.....	.....	G. W. Sherwood.
Charleston	Kanawha	598	6	67.5	.....	90	16	40	27†	32	4.10	.....	2.75	0.0	4	19	10	1	w.	R. C. Hewes.
Creston	Wirt	612	7	66.1	.....	88	13†	34	28	40	2.66	.....	0.98	0.0	4	17	6	7	ne.	J. M. Reed.
Cuba	Jackson	544	7	64.9	.....	89	14	30	28	41	1.48	.....	0.86	0.0	6	14	13	3	w.	C. T. Perry.
Doane	Wayne	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. W. Jude.
Elkhorn	McDowel	1,933	14	63.0	− 3.5	81	13	33	27	35	3.94	+ 1.33	0.96	0.0	8	8	18	4	sw.	J. J. Lincoln.
Elkins	Randolph	1,940	10	61.4	− 0.5	85	15	32	28	41	4.30	+ 1.43	1.71	0.0	8	8	13	9	n.	U. S. Weather Bureau.
Fairmont	Marion	879	4	65.3	.....	90	14	34	28†	44	2.10	.....	1.20	0.0	5	.....	.....	.....	.....	H. Glenn Fleming.
Glenville	Gilmer	738	14	66.2	− 1.1	89	14	34	28	42	3.06	− 0.14	1.20	0.0	4	9	4	17	.....	John Holt.
Grafton	Taylor	985	16	64.6	− 2.0	90	14	36	28†	41	2.64	+ 0.03	1.63	0.0	7	18	7	5	.....	S. W. Wilson.
Green Sulphur Springs	Summers	1,600	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Gwinn.
Hinton[a]	....do	1,400	13	65.4	− 2.6	82	11†	42	28†	32	5.28	+ 2.77	1.54	0.0	12	19	0	6	w.	R. R. Flanagan.
Huntington	Cabell	510	12	66.2	− 2.7	89	12	37	28	40	1.66	− 0.55	0.68	0.0	9	14	2	14	e.	L. H. Hutchinson.
Lewisburg	Greenbrier	2,300	8	62.2	.....	85	23	29	28	42	2.75	.....	0.75	0.0	8	14	8	8	e.	Geo. T. Argabrite.
Logan	Logan	665	7	68.8	.....	90	14	41	27	41	5.99	.....	3.60	0.0	9	6	23	1	e.	H. C. Ragland.
Lost Creek	Harrison	1,033	11	64.4	− 1.3	90	14	30	28	44	2.94	+ 0.37	1.80	0.0	5	21	6	3	w.	Allen Smith.
Madison	Boone	704	4	64.7	.....	88	12	39	25	34	4.66	.....	2.25	0.0	8	11	11	2	.....	S. E. Bradley.
Mannington	Marion	967	6	64.2	.....	91	14	30	28	45	1.44	.....	0.57	0.0	6	17	9	4	n.	Jas. A. Morgan.
Morgantown	Monongalia	1,250	13	65.2	− 3.0	88	14	35	28	36	1.32	− 1.83	0.55	0.0	6	10	13	7	s.	Horace Atwood.
Marlinton	Pocahontas	2,169	10	58.6	− 3.7	76	23	30	28	31	1.59	− 1.37	0.50	0.0	6	15	10	5	.....	N. C. McNeil.
Moundsville	Marshall	640	6	66.4	.....	94	14	35	28	42	0.85	.....	0.53	0.0	5	19	2	9	nw.	J. E. Matthews.
New Cumberland	Hancock	987	9	64.1	− 1.7	91	13	33	28	41	0.85	− 1.62	0.60	0.0	3	17	7	6	s.	Frank S. Evans.
New Martinsville	Wetzel	634	14	67.3	− 1.5	92	14	37	28	43	2.32	− 0.17	0.79	0.0	5	24	2	4	n.	Wm. Ankron.
Nuttallburg	Fayette	2,252	12	58.8	.....	81	11	30	23†	40	3.70	+ 1.51	1.25	0.0	8	15	10	5	.....	Stephen Tully.
Parkersburg	Wood	638	21	65.6	− 0.6	89	14	39	28	33	1.14	− 1.58	0.57	0.0	6	11	12	7	n.	U. S. Weather Bureau.
Parsons	Tucker	1,662	7	61.6	.....	86	13	31	29	43	7.22	.....	2.94	0.0	4	18	6	6	.....	J. W. Swisher.
Philippi	Barbour	1,192	10	63.4	− 2.1	89	14	30	28	39	3.83	+ 0.87	1.41	0.0	10	5	18	7	nw.	J. D. Dadisman.
Pickens	Randolph	2,785	16	59.2	− 2.8	80	14	31	28	32	6.77	+ 3.70	2.30	0.0	8	21	4	5	w.	Dr. J. L. Cunningham.
Pineville	Wyoming	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. M. Senter.
Point Pleasant	Mason	553	14	65.7	− 4.2	89	14	35	28	39	1.29	− 0.89	0.44	0.0	5	.....	.....	.....	se.	E. H. Armstrong.
Powellton[a]	Fayette	904	13	67.4	+ 0.7	89	14	36	28	41	3.25	+ 0.86	0.67	0.0	10	6	8	15	n.	D. Swain.
Princeton	Mercer	2,469	6	59.0	.....	76	23	31	28	39	8.75	.....	2.25	0.0	9	12	13	5	n.	H. Scott.
Robertsburg	Putnam	.....	.....	65.6	.....	90	12†	33	26†	46	1.17	.....	0.67	0.0	3	15	8	7	s.	E. P. Turley.
Ryan	Roane	693	5	63.4	.....	88	14	28	28	43	0.68	.....	0.22	0.0	6	19	6	5	.....	Wm. E. Ryan.
Smithfield	Wetzel	.....	5	62.0	.....	84	14	33	28	35	1.07	.....	0.67	0.0	3	24	2	4	ne.	H. F. Whisler.
Spencer	Roane	710	6	63.6	.....	89	14	28	28	45	1.12	.....	0.70	0.0	2	1	27	2	.....	A. M. McKown.
Sutton	Braxton	.....	4	.....	.....	.....	.....	.....	.....	.....	1.15	.....	0.60	0.0	4	22	0	8	.....	J. E. Baughman.
Terra Alta	Preston	3,207	8	58.4	.....	79	5	33	6	37	2.81	.....	1.86	0.0	2	15	5	10	w.	C. F. Dodge.
Union	Monroe	.....	6	60.7	.....	84	23	28	28	43	4.35	.....	1.95	0.0	9	.....	.....	.....	.....	Shelton Clarke.
Valley Fork	Clay	.....	6	65.2	.....	91	14	29	28	50	1.05	.....	0.75	0.0	3	15	11	4	.....	Miss Blanche Pierson.
Webster Springs	Webster	1,500	6	64.0	.....	88	14	34	27	36	3.65	.....	2.10	0.0	4	11	17	2	nw.	D. H. Hamrick.
Wellsburg	Brooke	1,225	8	62.9	.....	85	14	37	28	30	1.36	.....	0.81	0.0	5	18	11	1	w.	C. P. Waugh.
Weston	Lewis	824	14	62.2	.....	90	14	28	28	46	1.98	− 0.93	1.22	0.0	5	18	9	3	ne.	C. M. Davis.
Wheeling	Ohio	64.	25	63.6	.....	89	16	35	28	39	0.63	− 1.92	0.48	0.0	5	19	8	3	sw.	Miss M. B. Forsyth.
Williamson	Mingo	660	7	69.8	.....	91	14	40	27	36	2.36	.....	0.62	0.0	7	12	14	4	e.	J. F. Keyser.
Ohio.																				
Amesville	Athens	630	6	65.7	.....	94	13	34	27†	45	1.28	.....	0.52	0.0	8	20	7	3	nw.	F. W. Gibson.
Bangorville	Richland	1,380	23	61.9	− 2.8	90	13	34	28	34	1.68	− 1.38	0.56	0.0	8	11	17	2	nw.	S. M. Painter.
Bellefontaine	Logan	1,276	16	61.8	− 4.4	88	13†	29	28	41	1.40	− 1.35	0.52	0.0	5	13	11	4	se.	C. L. Lane.
Bladensburg	Knox	1,100	13	60.8	− 4.2	89	13	25	28	39	1.14	− 1.64	0.43	0.0	6	18	10	2	sw.	Miss M. A. Elliott.
Cadis	Harrison	1,245	6	64.4	.....	90	14	37	28	33	1.62	.....	0.98	0.0	7	15	9	6	se.	H. B. McConnell.
California	Hamilton	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.48	.....	1.05	0.0	5	17	5	8	e.	J. W. Ellms.
Cambridge	Guernsey	803	17	63.8	− 1.4	89	13	30	28	38	1.56	− 0.72	0.62	0.0	8	9	21	0	.....	Samuel Mehaffey.
Camp Dennison	Hamilton	570	17	65.3	− 4.0	92	14	30	28	39	0.84	− 1.15	0.48	0.0	5	18	7	5	se.	H. F. Pinkvoss.
Canal Dover	Tuscarawas	884	16	60.8	− 3.2	85	13†	30	28	37	1.46	− 1.18	0.55	0.0	7	14	11	5	n.	Ed. S. Slingluff.
Canton	Stark	1,065	27	61.6	− 2.3	86	14	34	28	31	1.94	− 0.98	1.00	0.0	9	20	1	9	n.	Prof. C. F. Stokey.
Cardington	Morrow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. A. Beatty.
Chillicothe	Ross	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Owen L. Brown.

TABLE 1.—*Climatological data for September, 1909. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Cont'd.																				
Cincinnati	Hamilton	628	39	67.2	− 1.8	90	13	42	27	31	1.39	− 0.92	0.98	0.0	6	14	10	6	n.	U. S. Weather Bureau.
Circleville	Pickaway	694	15	65.8	− 2.3	91	14	33	28	37	1.84	− 0.26	0.80	0.0	7	15	10	5	s.	Samuel W. Courtright.
Clarington	Monroe	600	7	65.5	.....	92	14	35	28	37	1.30	.....	0.98	0.0	6	12	13	5	sw.	Col. S. Tschappat.
Clarkesville	Clinton	1,010	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. T. M. Williams.
Columbus (1)	Franklin	918	32	64.2	− 1.7	88	13	40	28	30	1.81	− 0.71	1.49	0.0	7	15	8	7	n.	U. S. Weather Bureau.
Columbus (2)	....do	757	27	63.7	− 1.5	88	13†	32	28	35	1.52	− 1.24	0.75	0.0	6	13	10	7	n.	Ohio State University.
Columbus (3)	....do	.....	1	65.2	.....	86	13†	39	28	32	.....	.....	.....	0.0	...	14	10	6	n.	Capt. Paul Mason.
Columbus Reservoir	....do	.....	...	.....	.....	.....	.....	.....	.....	.....	1.37	.....	1.02	0.0	3	8	4	18	n.	Superintendent.
Coshocton	Coshocton	.....	...	.....	.....	.....	.....	.....	.....	.....	2.12	.....	0.66	0.0	6	.....	.....	.....	.....	Mrs. Ada Jeffries.
Dayton (1)	Montgomery	790	27	64.3	− 2.9	90	13†	32	28	38	0.84	− 1.89	0.50	0.0	7	18	9	3	ne.	Edith E. L. Boyer.
Dayton (2)	....do	.....	16	.....	.....	.....	.....	.....	.....	.....	0.70	− 1.76	0.50	0.0	7	.....	.....	.....	.....	Mrs. D. D. Rist.
Delaware	Delaware	927	13	62.8	− 3.3	90	13†	29	28	40	1.17	− 1.54	0.29	6.0	8	14	7	9	sw.	L. L. Hudson.
Demos	Belmont	1,325	20	66.8	+ 1.0	94	13†	37	28	37	0.63	− 2.12	0.41	0.0	5	25	4	1	nw.	J. F. Dysart.
Frankfort	Ross	750	17	64.2	− 2.7	90	14	34	28	40	1.67	− 0.70	0.86	0.0	5	16	4	10	n.	O. A. Cory.
Garrettsville	Portage	1,005	25	60.2	− 1.1	88	14	30	28	41	1.81	− 1.51	0.61	0.0	8	13	8	9	w.	S. M. Luther.
Granville	Licking	960	25	63.7	− 1.7	90	14	32	28	35	1.43	− 1.46	6.80	0.0	6	21	0	9	e.	Dr. L. E. Davis.
Gratiot	....do	1,000	19	62.2	− 3.3	86	13	32	28	32	1.86	− 0.90	0.59	0.0	6	15	12	3	n.	W. B. Longstreth.
Green	Adams	500	17	66.5	− 2.2	89	12†	36	28	35	3.06	+ 0.45	1.50	0.0	5	21	7	2	nw.	W. F. Kenyon.
Green Hill	Columbiana	1,135	18	60.6	− 2.7	89	13	26	28	42	1.13	− 1.56	0.30	6.0	7	16	12	2	sw.	Jos. E. Bentley.
Greenville	Darke	1,060	24	62.0	− 2.3	87	13	34	28	38	1.09	− 1.66	0.46	0.0	5	15	8	7	n.	G. A. Katzenberger.
Hillsboro	Highland	.....	2	63.9	.....	87	14	37	28	28	2.24	.....	0.78	0.0	5	12	14	4	nw.	Carey H. Roush.
Ironton	Lawrence	575	27	67.0	− 0.6	91	12†	36	28	42	1.58	− 1.18	0.45	6.0	7	19	4	7	sw.	James Bull.
Jacksonburg	Butler	975	22	64.7	− 5.0	89	13†	38	27	35	0.79	− 1.74	0.61	0.0	3	14	4	12	ne.	Dr. J. B. Owsley.
Kenton	Hardin	.....	7	62.1	.....	90	13†	31	28	41	1.00	.....	0.42	0.0	4	19	8	3	n.	N. S. Martin.
Killbuck	Holmes	1,087	17	62.0	− 2.6	88	14	33	28†	35	1.72	− 1.02	1.31	0.0	5	20	6	4	n.	Geo W. Nowells.
Lancaster	Fairfield	898	14	64.6	− 1.3	87	13	38	27	32	1.34	− 1.06	0.74	0.0	4	21	3	6	sw.	R. L. Renshaw.
Lawshe	Adams	900	6	65.0	.....	90	14	31	28	40	2.31	.....	1.40	0.0	8	19	3	8	w.	Ruth W. Hoffman.
McConnelsville	Morgan	710	26	64.4	− 2.1	89	14	33	28	36	1.35	− 1.49	0.98	0.0	5	12	11	7	sw.	C. H. Morris.
Marietta	Washington	627	66	66.0	+ 0.7	87	13†	37	28	33	1.38	− 1.81	0.69	0.0	7	16	6	8	n.	Prof. T. D. Biscoe.
Marion	Marion	980	19	64.0	− 2.6	93	13	32	28	37	1.62	− 1.24	0.52	0.0	7	13	11	6	se.	E. H. Raffensperger.
Milfordton	Knox	1,200	17	63.2	− 1.8	89	13	32	28	34	1.56	− 1.11	1.23	0.0	4	23	5	2	sw.	L. H. Burgess.
Milligan	Perry	875	16	62.5	− 3.7	90	13	27	28	42	1.59	− 0.62	0.56	0.0	4	17	9	4	nw.	V. C. Eyeland.
Millport	Columbiana	1,145	18	61.6	− 1.2	88	13†	29	28	40	0.96	− 1.45	0.22	0.0	8	14	14	2	s.	G. F. Copeland.
Nellie	Coshocton	850	9	62.1	.....	90	13†	29	28	38	1.43	.....	0.61	0.0	6	19	2	9	w.	E. L. Gamertsfelder.
New Alexandria	Jefferson	1,050	25	64.8	− 0.6	91	15	34	26	41	1.30	− 1.37	0.85	0.0	2	22	5	3	n.	Mrs. Mary K. Pennell.
New Berlin	Stark	1,100	17	62.4	− 2.4	90	13†	32	28	37	2.96	+ 0.22	1.44	0.0	8	23	2	5	n.	Clayton Holl.
New Richmond	Clermont	788	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Waterford	Columbiana	1,053	16	61.3	− 2.3	90	13†	29	28	42	0.65	− 1.77	0.20	0.0	5	20	9	1	sw.	Sam. C. Scott.
North Lewisburg	Champaign	1,095	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Orangeville	Trumbull	945	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. B. Wade.
Pataskala	Licking	1,050	17	62.8	− 3.3	87	13	35	28	38	2.83	− 6.19	1.24	0.0	7	10	17	3	se.	J. N. Ridenour.
Philo (1)	Muskingum	1,018	15	63.8	− 3.4	89	14	35	28	34	2.42	− 0.03	1.77	0.0	5	22	3	5	nw.	L. C. Burckhalter.
Philo (2)	....do	.....	6	65.0	.....	92	14	34	28	36	2.81	.....	1.58	0.0	8	21	5	4	nw.	Louis Hardtla.
Plattsburg	Clark	1,130	17	63.4	− 3.8	88	14	31	28	37	1.23	− 1.50	0.65	0.0	5	16	8	6	e.	F. E. Stewart.
Pomeroy	Meigs	781	26	68.0	+ 0.1	93	13	38	28	36	1.58	− 0.46	0.74	0.0	6	14	11	5	sw.	W. G. Branch.
Portsmouth	Scioto	527	79	65.6	− 2.2	86	12†	38	28	36	2.01	− 0.71	1.60	0.0	6	18	5	7	w.	Dr. H. A. Schirrman.
Rittman	Wayne	990	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. B. Gish.
Shenandoah	Richland	1,100	18	61.0	− 3.0	90	14	32	28	38	2.50	− 0.47	0.86	0.0	9	12	15	3	ne.	T. B. Arnett.
Sidney	Shelby	985	15	63.9	− 2.9	91	14	31	28	37	1.44	− 1.65	0.70	0.0	7	14	9	7	n.	H. B. Blake.
Somerset	Perry	1,080	11	64.4	− 3.6	89	13†	38	28	32	1.81	− 6.44	1.08	0.0	4	18	8	4	n.	Miss M. C. Sheridan.
Springfield	Clark	.....	...	.....	.....	.....	.....	.....	.....	.....	1.24	− 1.70	0.67	0.0	8	8	18	4	sw.	W. A. Webster.
Summerfield	Noble	.....	4	63.2	.....	90	14	28	28	42	1.39	.....	0.97	0.0	8	8	19	3	s.	H. R. McClintock.
Thurman*	Gallia	696	17	67.4	− 2.5	90	13	34	28	32	1.09	− 0.69	0.56	0.0	3	9	13	8	w.	D. D. Thomas.
Urbana	Champaign	1,031	14	63.0	− 1.7	91	13†	30	28	41	1.81	− 1.82	0.68	0.0	7	12	17	1	s.	Prof. J. H. Williams.
Warren	Trumbull	.....	12	62.2	− 2.0	92	14	30	28	41	1.24	− 1.84	0.45	0.0	6	18	3	9	sw.	M. D. McCorkle.
Waverly	Pike	590	27	64.9	− 3.4	93	14	31	28	41	1.51	− 1.14	0.63	0.0	6	19	3	8	n.	D. Lorbach.
Waynesville*	Warren	700	25	63.9	− 3.3	86	13†	26	28	33	1.06	− 1.44	0.68	0.0	4	17	6	7	ne.	Charles Michener.
Wooster	Wayne	1,030	25	62.2	− 1.4	90	14	30	28	35	1.73	− 1.59	0.80	0.0	7	17	5	8	se.	Experiment Station.
Youngstown	Mahoning	.....	...	.....	.....	.....	.....	.....	.....	.....	1.66	.....	0.70	0.0	6	20	0	10	w.	G. R. Patton.
Zanesville	Muskingum	.....	...	.....	.....	.....	.....	.....	.....	.....	1.89	− 0.57	1.17	0.0	4	14	1	15	n.	S. G. Sprague.
Virginia.																				
Big Stone Gap	Wise	1,540	18	64.9	− 1.7	83	13	35	28	33	3.03	+ 0.18	0.67	0.0	8	17	2	11	w.	John W. Fox, sr.
Blacksburg	Montgomery	2,170	18	60.6	− 3.8	84	15	28	28	42	3.87	+ 0.79	1.25	0.0	10	11	8	11	e.	Agric. Experiment Sta.
Burksgarden	Tazewell	3,250	14	58.0	− 2.4	78	13	27	28	41	5.50	+ 1.89	1.98	0.0	10	12	4	14	w.	C. H. Greever.
Elk Knob	Lee	3,243	6	65.0	.....	82	13	39	27†	23	2.73	.....	0.56	0.0	10	17	3	10	se.	Henry Nicoll.
Galax	Grayson	2,300	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. C. Williams.
Ivanhoe**‡	Wythe	2,028	5	62.0	.....	78	14†	40	26†	30	3.60	.....	1.25	0.0	16	12	14	4	w.	Miss Alice G. Jewett.
Marion	Smyth	2,224	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. W'n. State Hospital.
Max Meadows	Wythe	2,028	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James M. Graham.
Mendota	Washington	1,350	...	.....	.....	.....	.....	.....	.....	.....	2.62	.....	1.01	0.0	10	7	10	13	e.	Frank M. Baker.
Radford	Montgomery	1,773	...	.....	.....	.....	.....	.....	.....	.....	3.68	.....	1.28	0.0	10	16	0	14	w.	Arthur Roberts.
Speers Ferry	Scott	1,221	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. L. E. Venable.
Wytheville	Wythe	2,293	16	62.5	− 2.8	81	15	36	28	37	2.83	− 1.55	1.19	0.0	10	12	13	5	e.	U. S. Weather Bureau.
North Carolina.																				
Andrews	Cherokee	.....	...	68.2	.....	91	18	33	28†	48	3.32	.....	1.28	0.0	6	11	15	4	.....	J. D. Link.
Asheville	Buncombe	2,250	30	64.4	− 0.6	83	11	35	29	38	2.59	− 0.45	1.27	0.0	9	11	12	7	se.	U. S. Weather Bureau.
Banners Elk	Watauga	3,750	1	58.6	.....	78	5	29	28	38	3.94	.....	1.00	0.0	9	17	2	11	w.	T. L. Lowe.
Brevard	Transylvania	2,230	8	64.6	.....	86	1	31	29	40	3.90	.....	1.43	0.0	10	19	11	0	s.	W. E. Breese.
Bryson City	Swain	2,000	...	.....	.....	.....	.....	.....	.....	.....	2.85	− 0.41	0.97	0.0	9	.....	.....	.....	.....	D. K. Collins.
Hendersonville	Henderson	2,167	13	65.0	− 0.9	85	11	34	29	42	6.48	+ 2.48	1.55	0.0	13	16	3	11	se.	T. W. Valentine.
Hot Springs	Madison	1,326	11	67.8	− 0.5	86	11†	38	28	35	3.01	.....	0.98	0.0	6	19	4	7	w.	P. A. Garner.
Jefferson	Ashe	2,800	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. T. Colvard.
Marshall	Madison	1,646	8	66.4	.....	88	11	36	28	32	3.90	.....	1.30	0.0	7	.....	.....	.....	.....	W. E. Finley.
Murphy	Cherokee	1,614	...	.....	.....	.....	.....	.....	.....	.....	3.62	.....	1.30	0.0	8	.....	.....	.....	.....	Miss Julia Campbell.
Rock House	Macon	2,800	17	62.5	− 3.8	78	1	36	28	27	9.67	+ 3.02	4.20	0.0	15	10	8	12	e.	B. C. Hawkins.
Sunburst	Haywood	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lucien Buck.
Waynesville	....do	2,756	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. P. Swift.
Georgia.																				
Diamond	Gilmer	2,020	16	67.6	− 1.0	86	15	39	29	34	3.07	− 1.62	1.10	0.0	8	11	8	11	.....	R. A. Kimsey.
LaFayette	Walker	781	2	70.1	.....	88	1	37	28	33	2.15	.....	0.47	0.0	8	14	6	10	w.	Ralph A. Snow.
Alabama.																				
Albertville (1)	Marshall	1,042	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. J. B. Hobdy.
Bridgeport	Jackson	660	...	.....	.....	.....	.....	.....	.....	.....	4.17	.....	1.89	0.0	6	15	0	15	n.	Miss Maggie Rinkle.
Decatur	Morgan	573	27	71.4	− 1.3	91	1†	40	28†	38	2.72	− 0.24	1.20	0.0	8	12	2	16	e.	Ernest A. Carriger.
Florence	Lauderdale	563	25	72.8	− 0.2	96	1	39	28†	42	2.33	− 1.14	1.09	0.0	7	20	4	6	n.	G. H. Smith.
Guntersville	Marshall	580	...	.....	.....	.....	.....	.....	.....	.....	2.54	.....	1.34	0.0	8	13	7	10	e.	L. S. Long.
Madison	Madison	573	15	72.7	− 1.5	94	1†	39	29	40	2.37	− 1.33	1.40	0.0	6	19	10	1	se.	Albert Kilah.

TABLE 1.—*Climatological data for September, 1909. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Alabama—Cont'd.																				
Riverton	Colbert	360	12	70.7	− 2.4	95	3	35	27	41	4.87	+ 1.44	3.42	0.0	7	15	9	6	e.	E. R. Nelles.
Scottsboro	Jackson	652	26	71.0	− 0.8	90	1	38	30	43	1.90	− 1.67	0.82	0.0	6	12	11	7	.....	Miss Irene Caldwell.
Tuscumbia	Colbert	488	27	71.9	− 1.0	91	1†	42	28†	40	3.58	+ 0.46	1.59	0.0	8	12	5	13	se.	Samuel Moore.
Tennessee.																				
Ashwood[a]	Maury	725	31	70.3	− 0.3	92	12	39	29	37	6.25	+ 2.68	2.50	0.0	8	16	5	9	s.	Mrs. J. W. Fleming.
Benton	Polk	880	23	71.4	+ 0.5	91	22	35	28	43	2.95	− 0.11	0.90	0.0	7	11	14	5	n.	G. L. Williams.
Byrdstown	Pickett	1,026	15	68.6	− 1.9	89	22	35	28	38	1.32	− 2.11	0.47	0.0	9	3	25	2	s.	Dr. Jno. C. Chilton.
Carthage	Smith	500	27	69.8	− 1.2	92	12†	38	28	35	3.15	− 0.19	1.18	0.0	6	14	11	5	ne.	E. C. Pickering.
Cedar Hill	Robertson	625	12	70.2	− 2.7	90	9	43	27	28	4.30	+ 0.96	2.50	0.0	3	20	8	2	s.	J. F. Ruffin.
Chattanooga	Hamilton	808	31	71.2	0.0	90	1	45	29	31	4.44	+ 1.19	3.04	0.0	8	10	11	9	ne.	U. S. Weather Bureau.
Clarksville	Montgomery	520	43	69.6	− 1.1	90	12†	39	28	35	3.17	+ 0.18	1.80	0.0	6	20	9	1	n.	Prof. Jas. A. Lyon.
Decatur	Meigs	850	14	69.9	− 1.0	91	1	35	28	43	2.80	− 0.93	1.10	0.0	11	16	10	4	sw.	J. W. Lillard.
Dickson	Dickson	800	13	69.8	− 1.7	91	8	38	29	41	2.71	+ 0.04	1.08	0.0	6	13	15	2	n.	N. R. Sugg.
Dover	Stewart	.....	15	70.4	− 1.6	93	9†	36	28	43	3.56	− 0.05	1.59	0.0	5	15	9	6	s.	A. M. Tippit.
Dunlap	Sequatchee	726	....	70.6	.....	90	11†	36	28†	43	3.88	.....	1.80	0.0	7	16	5	9	.....	S. B. Boyd.
Elizabethton	Carter	1,575	20	68.0	− 0.7	88	4	36	28	37	3.90	+ 1.43	0.90	0.0	8	19	6	5	w.	Lee F. Miller.
Erasmus	Cumberland	1,850	13	65.0	− 1.3	86	1†	30	28	45	4.16	+ 1.12	1.16	0.0	9	15	12	3	se.	Mrs. E. D. Ashley.
Florence	Rutherford	560	28	69.3	− 2.0	88	12	40	28	31	4.42	+ 1.05	1.90	0.0	7	16	7	7	s.	Erastus P. Bell.
Franklin	Williamson	655	18	70.0	− 1.3	90	12	40	29	32	4.95	+ 1.35	1.38	0.0	7	16	0	14	.....	J. L. Parkes, jr.
Harriman	Roane	841	14	69.3	− 0.9	88	9†	38	28	39	4.26	+ 1.32	2.20	0.0	7	12	12	6	.....	Robert R. Ayres.
Hohenwald	Lewis	983	24	69.8	+ 0.2	93	9	35	29	44	2.88	− 0.35	1.35	0.0	7	10	19	1	n.	John Lutzelman.
Iron City	Lawrence	.....	12	69.8	− 2.4	91	12	34	29	43	3.28	− 0.04	1.95	0.0	6	9	19	2	nw.	Capt. H. P. Seavy.
Johnsonville	Humphreys	364	14	69.8	− 2.6	93	9†	36	28	40	3.32	+ 0.08	1.50	0.0	8	16	8	6	nw.	Miss Sallie B. Mathews.
Jonesboro	Washington	1,740	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James H. Epps, jr.
Knoxville	Knox	977	39	69.0	− 0.4	86	12	40	28	31	2.91	+ 0.10	1.79	0.0	8	13	8	9	ne.	U. S. Weather Bureau.
Lebanon[f]	Wilson	522	....	69.9	.....	95	6	39	28	38	3.95	.....	1.60	0.0	6	.....	.....	.....	n.	Logan Fields.
Lewisburg	Marshall	727	16	70.0	− 1.3	93	2†	36	28	47	4.85	+ 1.30	2.22	0.0	9	15	7	8	se.	Dr. R. D. Crutcher.
Lynnville	Giles	770	21	70.4	− 0.5	88	1†	41	29	32	6.96	+ 3.16	3.52	0.0	11	13	13	4	s.	Col. J. H. Burrow.
McMinnville	Warren	1,011	26	68.8	− 0.8	89	2	36	28	37	6.37	+ 3.31	1.54	0.0	10	11	16	3	s.	J. T. Sparkman.
Maryville	Blount	1,050	15	70.2	− 1.6	93	1	37	28	36	3.38	+ 0.47	1.44	0.0	10	14	8	8	e.	Mrs. F. E. Benedict.
Mountain City	Johnson	2,486	13	62.7	− 0.4	83	13	31	27	44	3.63	+ 0.72	1.05	0.0	12	18	9	3	.....	E. E. Barry.
Nashville	Davidson	654	39	70.8	− 0.7	90	12	45	29	32	4.23	+ 0.55	1.91	0.0	8	14	11	5	ne.	U. S. Weather Bureau.
Newport[f]	Cocke	1,280	19	67.8	− 2.0	83	12†	38	29	29	2.10	− 0.10	0.65	0.0	5	.....	.....	.....	w.	Dr. C. T. Burnett.
Palmetto	Bedford	770	16	70.6	− 1.7	93	9	38	28	44	3.43	− 0.19	1.57	0.0	12	16	8	6	ne.	Mrs. Ross Woods.
Pinewood	Hickman	.....	3	.....	.....	94	9	.....	.....	.....	.....	.....	.....	0.0	....	19	7	4	s.	Miss Carrie Cash.
Pope	Perry	.....	13	71.0	− 1.6	94	1	35	28	35	2.90	+ 0.21	1.80	0.0	4	24	3	3	s.	Miss Bessie Howard.
Rogersville	Hawkins	1,150	25	67.6	− 1.0	88	18	34	28	38	3.69	+ 1.27	0.88	0.0	11	17	6	7	e.	Fred Beal.
Rugby	Morgan	1,410	22	65.8	− 1.5	89	12	28	28	47	3.09	− 0.43	1.21	0.0	6	11	10	9	n.	S. G. Wilson.
Savannah	Hardin	442	26	.....	.....	.....	.....	.....	.....	.....	3.50	+ 0.02	.....	.....	.....	.....	.....	.....	.....	W. F. Bell.
Sevierville	Sevier	.....	4	68.5	.....	90	1†	33	28	44	2.28	.....	0.71	0.0	12	7	10	13	sw.	H. O. Eckel.
Sewanee	Franklin	2,000	15	67.4	− 2.0	83	11	40	27	29	4.35	+ 1.45	1.41	0.0	6	14	0	16	e.	University of South.
Sparta	White	920	4	68.3	.....	88	12	38	28	36	2.06	.....	0.81	0.0	4	16	7	7	w.	E. H. Hull.
Springdale	Claiborne	1,058	....	66.5	− 2.1	95	1	33	27	46	1.71	− 1.02	0.43	0.0	7	13	6	11	w.	Mrs. Lucy E. Breeding.
Springville	Henry	377	7	68.8	.....	92	9	33	28	42	3.52	.....	1.32	0.0	11	21	2	7	n.	H. A. Boden.
Tellico Plains	Monroe	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tullahoma	Coffee	1,075	21	69.6	+ 0.4	91	2	36	29	41	5.35	+ 2.29	2.31	0.0	9	13	9	8	n.	R. T. Moore.
Waynesboro	Wayne	753	23	70.3	− 0.2	92	2	35	28	38	3.27	+ 0.07	0.91	0.0	8	14	10	6	n.	H. C. Boyd.
Widersville	Henderson	.....	12	69.8	− 1.9	95	3	36	30	44	4.44	+ 1.68	1.66	0.0	6	17	9	4	n.	W. R. Wilson.
Yukon	Lincoln	850	14	69.6	− 3.3	88	16	40	29	37	4.17	+ 0.74	2.00	0.0	9	9	16	5	n.	W. P. Watson.
Kentucky.																				
Alpha	Clinton	.....	15	67.4	− 3.5	90	12	38	28	31	2.65	− 0.21	0.75	0.0	6	11	10	9	w.	W. W. Hicks.
Anchorage	Jefferson	700	8	68.3[b]	.....	89[b]	9†	32[b]	28	40[b]	2.24	.....	2.00	0.0	3	15[a]	10[a]	4[a]	se.	C. E. Barrett.
Bardstown	Nelson	637	13	69.6	− 1.8	95	14	36	28	42	1.91	− 0.40	0.96	0.0	6	19	1	10	ne.	G. M. Talbott.
Beattysville	Lee	650	6	66.8	.....	91	13†	35	28	44	1.40	.....	0.38	0.0	5	7	9	14	nw.	G. W. Cann.
Beaverdam	Ohio	441	6	67.6	.....	95	12	33	28†	48	1.79	.....	0.90	0.0	5	21	0	9	ne.	T. S. Woodward.
Berea	Madison	1,070	8	67.2	.....	91	14	35	27	38	2.00	.....	1.04	0.0	5	26	2	2	ne.	C. F. Rumold.
Bowling Green	Warren	500	20	70.8	− 1.5	93	12†	40	28	40	2.71	− 0.15	1.00	0.0	6	12	6	12	n.	Mrs. L. G. Causey.
Burnside	Pulaski	589	19	.....	.....	.....	.....	.....	.....	.....	1.59	− 1.18	0.64	0.0	9	15	6	9	n.	G. M. Estes.
Cadiz	Trigg	.....	7	69.3[c]	.....	92[c]	9	36[c]	28	47[c]	3.39	.....	1.01	0.0	8	21	7	2	.....	John S. Lawrence.
Calhoun	McLean	397	6	70.4	.....	93	12	39	27†	36	1.96	.....	0.88	0.0	6	16	10	4	s.	W. A. Taylor.
Catlettsburg	Boyd	544	16	68.8[a]	− 1.4	92[a]	2†	38[a]	28	41[a]	1.62	− 0.95	0.94	0.0	9	21	4	5	n.	Chas. N. Bruns.
Earlington	Hopkins	370	20	67.0	− 3.5	93	12†	36	28	49	3.01	− 0.03	0.75	0.0	8	19	4	7	n.	J. B. Atkinson.
Edmonton	Metcalfe	600	18	68.7[c]	− 1.0	91[f]	12	34[c]	28	41[f]	2.93	− 0.26	1.20	0.0	7	10[c]	7[c]	6[c]	.....	Miss Lee Ray.
Eubank	Pulaski	1,177	15	66.4	− 2.7	88	13†	35	28†	40	1.46	− 1.79	0.45	0.0	9	16	3	11	ne.	W. H. Henderson.
Falmouth	Pendleton	530	20	.....	.....	.....	.....	.....	.....	.....	0.88	− 1.16	0.33	0.0	8	19	3	8	s.	J. V. Oldham.
Farmers	Rowan	668	4	65.6	.....	90	12†	34	27†	42	3.99	.....	1.36	0.0	7	15	10	5	e.	Miss Gertrude Sorrell.
Frankfort	Franklin	560	19	67.4	− 1.1	86	4	41	27	31	2.03	− 1.08	1.60	0.0	8	16	3	11	nw.	Gustave Schaefer.
Franklin	Simpson	691	16	70.7	− 0.4	92	12	39	28	35	2.60	− 0.56	0.95	0.0	7	7	21	2	n.	J. E. Newman.
Greensburg	Green	581	17	65.6	− 3.4	97	12	32	28	51	0.91	− 2.14	0.42	0.0	4	17	0	13	s.	L. C. Alcorn.
Highbridge	Jessamine	762	7	.....	.....	.....	.....	.....	.....	.....	3.00	.....	1.64	0.0	7	20	4	6	.....	Miss Lulu Wood.
Hopkinsville	Christian	524	13	69.8	− 1.6	93	12†	42	27†	39	5.70	+ 3.05	2.00	0.0	7	16	4	10	n.	W. F. Randle.
Irvington	Breckinridge	.....	11	68.7	− 2.0	89	12	38	28	30	1.35	− 1.54	0.58	0.0	6	24	2	4	sw.	W. J. Piggott.
Leitchfield	Grayson	635	14	67.5	− 1.9	89	12	37	28	35	1.78	− 1.87	0.55	0.0	6	20	7	3	ne.	John E. Stone.
Lexington	Fayette	989	22	65.6	− 2.3	87	12	38	27	28	4.88	+ 2.46	2.14	0.0	8	15	8	7	n.	U. S. Weather Bureau.
Loretto	Marion	681	12	68.0	− 2.4	89	12†	33	28	42	1.95	− 0.63	0.92	0.0	7	18	11	1	.....	Loretto Academy.
Louisville	Jefferson	525	37	69.2	− 0.7	92	12	42	27	30	2.18	− 0.45	1.62	0.0	6	14	9	7	n.	U. S. Weather Bureau.
Marion	Crittenden	.....	15	69.6	− 2.2	91	12	40	27†	34	3.64	+ 0.73	1.49	0.0	6	16	6	8	n.	B. C. Paris.
Maysville	Mason	524	13	66.4	− 4.0	94	12†	36	28	42	1.89	− 0.82	1.09	0.0	5	23	3	4	nw.	Mrs. M. D. Marsh.
Middlesboro	Bell	1,128	16	63.8	− 3.8	78	1†	36	27	34	2.24	+ 0.04	0.83	0.0	7	21	8	1	.....	B. H. Perkins.
Mt. Sterling	Montgomery	930	20	65.8[a]	− 1.6	87	12†	37[b]	28	32[a]	5.74	+ 3.37	3.05	0.0	6	17	3	10	n.	James O'Connell.
Owensboro	Daviess	479	13	67.8	− 2.7	89	22	38	28†	41	2.41	− 0.13	1.70	0.0	6	17	3	10	se.	Henry S. Berry.
Owenton	Owen	700	13	65.6[a]	− 4.7	86[a]	19	38[a]	27	33[a]	0.80	− 1.98	0.50	0.0	4	11	18	1	.....	J. T. Walker.
Paducah	McCracken	341	17	71.8	− 2.4	92	12	46	27	26	4.44	+ 1.32	1.90	0.0	7	21	3	6	e.	W. R. Wright.
Pikeville	Pike	.....	....	.....	.....	.....	.....	.....	.....	.....	2.52	.....	0.72	0.0	6	7	7	16	.....	A. R. Williams.
Richmond	Madison	926	20	68.6	− 2.0	91	13	38	27	35	1.20	− 1.19	0.53	0.0	7	14	4	12	.....	I. W. Crooke.
St. John	Hardin	777	13	66.8	− 1.9	88	12†	36	28†	41	1.40	− 1.43	0.44	0.0	7	19	8	3	.....	Bethlehem Academy.
Scott	Kenton	.....	....	67.0	− 3.1	89	12†	36	28	36	1.68	− 0.60	1.07	0.0	6	13	10	7	n.	E. B. Wilson.
Shelby City	Boyle	1,087	15	65.1	− 4.7	87	12†	34	28	37	2.16	− 0.16	1.16	0.0	8	18	7	5	n.	W. E. Grubbs.
Shelbyville	Shelby	759	20	65.2	− 4.3	87	13†	34	28	40	2.58	− 0.19	2.07	0.0	5	10	15	5	n.	Dr. H. W. Preissler.
Taylorsville	Spencer	422	7	66.8	.....	87	4†	33	28	37	2.08	.....	1.29	0.0	5	16	10	4	ne.	E. D. Bourne.
Williamsburg	Whitley	939	12	68.2	− 2.0	90	18	39	27†	40	1.00	− 2.04	0.55	0.0	5	9	0	21	.....	Mrs. Anna L. Adkins.
Williamstown	Grant	943	7	68.0	.....	87	13†	41	27	30	1.21	.....	0.53	0.0	6	21	4	5	.....	Mrs. Sarah E. Carter.
Indiana.																				
Anderson	Madison	892	12	63.6	− 3.2	88	13	33	28	34	2.74	− 0.28	1.39	0.0	7	17	8	5	se.	W. H. Stanton.
Bloomington	Monroe	744	11	64.3	− 4.0	89	13	34	27†	40	2.25	− 0.20	1.27	0.0	6	20	3	7	n.	E. E. Ramsey.
Bluffton	Wells	835	6	61.0[a]	.....	90[a]	13	32[a]	28	41[a]	4.19	.....	2.03	0.0	3	16	0	12	.....	C. C. Dean.
Butlerville	Jennings	767	16	67.2	− 0.7	92	13	32	28	41	0.88	− 2.02	0.44	0.0	5	22	5	2	n.	C. F. Hole.

TABLE 1.—*Climatological data for September, 1909. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Indiana—Cont'd.																				
Cambridge City	Wayne	941	10	62.0	− 3.3	92	13	28	28	44	1.70	− 1.59	0.67	0.0	10	22	6	8	n.	Charles Lemberger.
Columbus	Bartholomew	632	18	65.4	− 1.4	91	13	33	28	43	4.95	+ 1.90	3.40	0.0	8	22	1	7	sw.	John A. Perry.
Connersville	Fayette	769	20	63.4	− 2.1	90	13	30	28†	45	2.25	− 0.34	1.03	0.0	4	19	7	4	se.	C. C. Hibbs
Delphi	Carroll	668	16	62.0	− 2.8	91	13	32	27†	40	2.95	+ 0.22	0.90	0.0	7	14	8	8	.....	R.L.Higginbotham & Son
Eminence	Morgan	782	....	63.4	.....	87	12†	32	28	37	2.94	.....	1.17	0.0	4	14	14	2	w.	Dr. E. E. Kelso.
Evansville	Vanderburg	386	10	69.2	− 0.5	96	12	42	27	28	2.30	− 0.36	1.43	0.0	9	13	16	1	ne.	U. S. Weather Bureau
Farmersburg§	Sullivan	.....	....	65.7	.....	89	13	34	28	39	2.83	.....	0.85	0.0	6	19	4	7	nw.	Maurice Yeager.
Farmland	Randolph	1,101	20	62.3	− 2.8	86	13	34	28	31	2.28	− 1.09	0.85	0.0	9	18	0	12	se.	W. J. Davisson.
Greenfield	Hancock	905	....	64.4	.....	87	13	36	28	31	3.42	.....	1.04	0.0	6	2	21	7	ne.	W. C. Goble.
Greensburg	Decatur	954	5	65.6	.....	89	14	34	28	45	1.86	.....	0.70	0.0	4	20	5	5	ne.	Charles H. Ewing.
Heltonville	Lawrence	.....	....	.....	.....	.....	.....	.....	.....	.....	2.31	.....	1.35	0.0	5	11	10	4	w.	E. L. Palmer.
Huntingburg	Dubois	.....	....	67.5	.....	93	13	34	27†	46	2.30	.....	0.96	0.0	5	.....	.....	.....	.....	H. Dufendach.
Huntington	Huntington	741	11	62.4	− 3.1	90	13	35	28	35	2.65	− 0.29	1.25	0.0	6	18	6	6	ne.	Charles McGrew.
Indianapolis	Marion	822	33	64.3	− 2.4	87	13	38	28	31	2.15	− 0.90	0.53	0.0	9	15	9	6	ne.	U. S. Weather Bureau.
Jeffersonville§	Clark	455	12	66.2	− 3.9	90	22	39	27	31	2.20	+ 0.04	1.54	0.0	7	15	12	3	n.	John C. Loomis.
Judyville	Warren	.....	....	62.4	.....	89	13	30	27	36	3.63	.....	1.37	0.0	4	20	5	5	ne.	D. R. Warrick.
Kokomo	Howard	840	11	61.7	− 4.6	87	13	32	28	35	3.69	+ 1.05	1.57	0.0	6	13	14	3	n.	John W. Doty.
Lafayette	Tippecanoe	617	22	62.9	− 3.0	89	13	35	28	33	3.67	+ 1.01	1.15	0.0	7	21	1	8	se.	W. J. Jones, Jr.
Logansport	Cass	620	17	63.4	− 2.8	92	13	33	28	40	3.11	+ 0.45	0.85	0.0	6	16	1	13	e.	Charles Massena.
Madison	Jefferson	460	11	66.6	− 3.6	92	13	36	27†	38	1.23	− 1.10	0.45	0.0	5	19	6	5	nw.	J. Cooperider.
Marengo	Crawford	363	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. M. Johnson.
Marion	Grant	814	14	63.1	− 2.7	90	13	32	28	38	4.04	+ 1.70	2.92	0.0	7	17	2	11	n.	James F. Hood.
Markle	Huntington	814	10	61.7	− 3.2	89	13	30	28	43	6.80	+ 4.04	3.50	0.0	4	14	9	7	nw.	I. S. Shideler.
Mauzy	Rush	980	21	63.6	− 0.5	90	13†	29	28	39	2.06	− 0.82	0.80	0.0	5	12	11	7	sw.	E. Kirkwood.
Moores Hill	Dearborn	.....	....	65.8	.....	99	17	36	28	34	1.22	.....	0.50	0.0	6	22	5	3	ne.	W. S. Bigney.
Mount Vernon	Posey	410	15	67.4	− 2.9	94	4	38	27†	42	2.63	+ 0.45	0.80	0.0	8	22	0	8	n.	C. M. Spencer.
Paoli	Orange	611	5	65.7	.....	92	13	28	28	44	1.67	.....	0.64	0.0	5	15	10	5	ne.	James A. Gillum.
Princeton	Gibson	481	19	67.6	− 0.6	93	19	33	28	40	2.16	− 1.09	0.95	0.0	4	28	1	1	.....	Elisha Jones.
Richmond	Wayne	972	17	62.6	− 3.1	90	13†	30	28	39	1.24	− 1.52	0.50	0.0	3	11	13	6	.....	Walter Vossler.
Rochester	Fulton	775	....	61.9	.....	82	13	29	27	28	3.96	.....	1.38	0.0	8	18	5	7	.....	J. P. Keith.
Rockville	Parke	722	15	64.6	− 2.5	87	13	37	27	30	1.98	− 0.66	0.68	0.0	5	14	5	11	se.	Dr. W. N. Wirt.
Rome	Perry	370	....	70.5	.....	95	12†	37	28	40	2.28	.....	0.87	0.0	7	15	12	3	ne.	Adam Anspach.
Salamonia	Jay	.....	....	61.4‡	.....	88‡	13†	30‡	28	41‡	1.72	.....	0.72	0.0	8	11	5	10	ne.	C. V. Skinner.
Salem	Washington	717	11	66.0	− 2.5	91	12	30	28	43	1.15	− 1.45	0.44	0.0	6	20	7	3	ne.	E. S. Allen.
Scottsburg	Scott	570	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. H. Park.
Seymour	Jackson	610	14	66.2	− 1.7	91	13	33	28	41	3.09	+ 0.38	2.47	0.0	6	16	13	1	se.	J. R. Blair
Shelbyville	Shelby	.....	....	64.4	.....	91	12	31	28	39	1.97	.....	0.97	0.0	7	10	18	2	sw.	B. F. Crouch.
Terre Haute	Vigo	498	11	67.1	− 2.9	90	14	38	28	32	4.06	+ 1.24	2.00	0.0	5	18	6	6	nw.	R. G. Gillum.
Veedersburg	Fountain	612	....	65.9	.....	90	12†	33	28	43	2.80	.....	1.10	0.0	6	23	4	3	n.	L. A. Culver.
Vevay	Switzerland	525	19	67.4	− 2.1	96	12†	40	28	32	0.75	− 2.23	0.35	0.0	5	8	17	5	sw.	Miss Frederica Boerner.
Vincennes	Knox	431	10	67.6	− 2.9	93	12†	35	28	42	3.35	+ 0.76	1.00	0.0	6	19	1	10	se.	G. V. List.
Washington	Daviess	484	7	67.2	.....	92	11	36	28	36	2.30	.....	1.03	0.0	7	20	0	10	e.	H. B. Turrell.
Whitestown	Boone	.....	....	62.2	.....	85	13	33	28	32	2.67	.....	0.86	0.0	5	12	12	6	nw.	C. A. Stevenson
Winona Lake	Kosciusko	.....	....	63.2	.....	91	13	35	28	39	2.80	.....	1.04	0.0	11	8	13	9	w.	Rev. A. A. Young.
Worthington	Greene	526	20	66.6	0.0	89	12†	33	28	40	1.67	− 1.47	0.53	0.0	5	13	17	0	.....	C. A. Geckler.
Illinois.																				
Albion	Edwards	531	17	66.6	− 2.5	91	13	38	27†	33	4.62	+ 1.74	2.70	0.0	6	19	10	1	ne.	B. F. Michels.
Cairo	Alexander	359	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
Charleston	Coles	720	18	64.8	− 3.0	90	13	34	27	36	3.35	+ 0.49	1.78	0.0	8	15	11	4	s.	Jacob B. Dazey.
Equality	Gallatin	421	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. L. W. Gordon.
Fairfield	Wayne	495	18	68.4	− 1.7	95	3	33	28	41	4.10	+ 1.07	1.98	0.0	6	19	2	9	ne.	George A. Tromly.
Flora	Clay	495	23	67.6	− 0.4	96	3	34	28	40	5.79	+ 2.86	3.37	0.0	7	18	9	3	ne.	Jos. S. Peak.
Golconda	Pope	500	30	70.8	− 0.7	92	9†	38	28	39	5.15	+ 1.99	1.61	0.0	7	15	6	9	sw.	Dr. D. Lawrence.
Hoopeston	Vermillion	715	7	63.2	.....	89	13	33	27	30	2.33	.....	0.95	0.0	6	19	4	7	.....	S. F. Hoskinson.
McLeansboro	Hamilton	462	26	67.4	− 2.1	91	3	38	28	34	3.72	+ 0.83	1.40	0.0	6	19	2	9	se.	C. C. Judd.
Martinsville§	Clark	630	20	66.5	− 1.4	94	12	33	28	40	2.88	+ 0.27	1.38	0.0	5	14	6	10	n.	G. M. Daugherty.
New Burnside	Johnson	556	14	67.3	− 4.7	91	3	37	27	40	5.47	+ 2.57	1.80	0.0	6	20	2	8	e.	George Harris.
Olney	Richland	486	19	68.2	− 1.4	94	3	36	28	40	3.94	+ 1.11	1.69	0.0	5	14	8	8	ne.	Victor E. Phillips.
Palestine	Crawford	500	26	67.6	+ 0.2	90	12†	36	28	38	1.83	− 1.18	0.90	0.0	3	14	13	3	n.	Alexander Charley.
Paris	Edgar	600	12	64.2	− 4.7	89	13	36	27†	35	3.14	+ 0.28	1.49	0.0	7	19	10	1	se.	H. W. Twyman.
Philo	Champaign	700	24	63.4	− 2.4	90	13	33	28	36	2.68	− 0.21	1.48	0.0	4	19	6	5	ne.	H. A. Burr.
Rantoul	...do...	768	18	64.4	− 2.3	94	14	36	27	35	2.36	− 1.03	1.41	0.0	5	21	4	5	ne.	Wm. Breiner.
Robinson	Crawford	500	9	68.8	− 0.4	91	11†	38	27†	37	3.85	.....	1.57	0.0	6	22	3	5	ne.	A. P. Woodworth.
Sumner	Lawrence	459	....	67.3	.....	90	3	36	28	36	2.88	.....	1.25	0.0	4	19	6	5	s.	O. A. Fyffe.
Tuscola	Douglas	644	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. W. Lester.
Urbana	Champaign	725	7	63.4	.....	90	13	36	27	32	2.36	.....	1.75	0.0	6	9	20	1	se.	Prof. J. G. Mosier.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured
T. Precipitation is less than 0.01 inch rain or melted snow.
a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 3, Ohio Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New York.																																	
Allegany	Allegheny				.03	.16					.19					1.53							T.	.53	.03		.66			.60		3.73
Bolivar	do	.05			.04	.14					.48						.86							1.25	.06		.14			.20		3.22
Franklinville	do	.02			T.	.22					.25					.25	.37						T.	.58	.10		.21		T.	T.	.50		2.50
Jamestown	do																																
Olean‖	do					.16					.26	T.					1.74								.76			.40			.18		3.50
Maryland.																																	
Deer Park	Youghiogheny				.51		.05				1.90						.39							.20									3.05
Grantsville	do				.60						.20						.30							1.60									2.70
Oakland	do				.53	.50					1.56	.22					.54						.01	.20									3.56
Pennsylvania.																																	
Aleppo	Ohio				1.20					•	.04						.02						T.	.04									1.30
Baldwin	Allegheny				.10						.15					T.	.60					T.	.33	.16						.24			1.58
Beaver Dam	Ohio				.27	.01					.03						.02								.39						.14			0.86
California	Monongahela															T.							T.		1.35						T.			1.35
Clarion	Allegheny																																	
Claysville	Ohio				.73												.03							.48	.14						.07			1.47
Confluence	Youghiogheny				.90	.30	T.				.10						.42								.96									2.68
Davis Island Dam	Ohio				.15	.05	T.				.03			T.			.01								.32						.08			0.64
Derry Station	Allegheny				.37	.04					.08													.74	.26					.06			1.55
Franklin	do	T.			.30	.05				T.	.05					T.	T.						T.	.70	T.		T.	T.		.10	.22			1.42
Freeport	do				.12	.15					.17						.63								.50						.19			1.76
Greensboro	Monongahela				.26	.14	.06					.01					.08								.26						.02			0.83
Greensburg	Youghiogheny				.45	.09				T.	.21						.99							33	.14		T.				.07			2.28
Greenville	Ohio	.01			.20	.14				.07	.26						.29						.01	.15	.02		.02	T.		T.	.13			1.30
Grove City	do				.21	.08					.12						.03						T.	.14							.33			0.91
Herrs Island Dam	Allegheny	T.			.33	.04					.01			T.			.06							T.	.38						.09			0.91
Indiana	do				.17	.12					.13						.47							1.08	.09						.16			2.22
Irwin	Monongahela				.34						.13						.98						T.	.71	.17									2.33
Johnstown	Allegheny	T.			.26	.44	.02				.24	.02					.62	.11							1.21						.04			2.96
Lock No. 4	Monongahela	T.			.58	.05					.30						.28							T.	.20						.05			1.46
Lycippus	Allegheny				.33	.06					.27						.32						T.	.34	.38	T.					.07			1.77
Parkers Landing	do				.14	.12					T.						.94								.54			.12			.08			1.94
Pittsburg	Ohio			.07	.17	.05				.01	.01					.03							T.	.34							.08			0.76
Saegerstown	Allegheny	.08			.28	.22					.16						.01							.75	.02	.02	.02	.09		.03	.50			2.18
St. Marys	do				.15	T.					.44						.82						T.	.52							.18			2.11
Saltsburg	do				.30	.06					.06					1.24								T.	1.10			T.			.10			2.86
Skidmore	Ohio																							.40							.40			0.80
Somerset	Youghiogheny				.90																			1.51										2.41
Springdale	Allegheny				.25	.02											.40								.76						.13			1.56
Uniontown	Monongahela				.82	.03				T.	.03						.05						T.	•	.36						.04			1.33
Warren	Allegheny	.06			.15	.19					.10						.48							.30							.40			1.68
West Newton	Youghiogheny				.38	.04					.18						.40							T.	.28						.06			1.34
West Virginia																																	
Arbovale	Great Kanawha			T.	.28	.02		.02		.15	.18						.81						T.	.35	.15									1.96
Bancroft‖	do				.20	.12				.63	.63	.09					.05						.02		.03									1.77
Beckley	do				.30	.42		.17		1.98	.24					.24				.57															3.92
Ben's Run	Ohio			.16	.38						.74														.04									1.32
Bluefield	Great Kanawha				.22		.35	.45		1.80	.07						2.10	.09					.04	.17	.38									5.67
Brandonville	Monongahela				.70	.10	.02				.14						.25								1.07									2.28
Buckhannon	do				1.40	T.					10 1.49						.03							.54										3.56
Cairo	Little Kanawha			.45						T.	.60						.08								.30									1.43
Central Station	Middle Island Creek			.08	.43			•	•	•	•	•	•	•	•	•	•	2.01					.01	.19	.05									2.77
Charleston‖	Great Kanawha				.15	2.75				.55	.65												T.		T.									4.10
Creston‖	Little Kanawha				.72					T.	.83	.98					T.							T.	.13									2.66
Cuba	Sand Creek			.44	.42					.04	.51					T.							T.	.02	.05									1.48
Davis	Monongahela																																	4.02
Doane	Big Sandy																																	
Elizabeth	Little Kanawha																																	
Elkhorn	Big Sandy	T.			.59	.36		.51		.96	.52						.15						.01	.84									3.94
Elkins	Monongahela			.22	.31	T.				.46	1.25		T.			.28	.78						T.	.98	.02					T.			4.30
Fairmont	Monongahela				.52	.05					1.20													.28		.05								2.10
Glenville‖	Little Kanawha				1.20	.28					.98	T.					T.								.60									3.06
Grafton	Monongahela				.85	.02					1.03		.03				.13							.45	.13									2.64
Green Sulphur Springs	Great Kanawha																																	
Hinton‖	do				.50	.16		.20	.18	.72	1.54	.34					.28	.12	.02					.02	1.20									5.28
Huntington‖	Ohio				.14	.14				.68	.38	.02					.14						.06	.08	.02									1.66
Lewisburg	Great Kanawha				.75	.17		.14		.75	.55						.24					T.	T.	.03	.12									2.75
Logan	Guyandotte			.03	.10	.22		.26		.93	3.60					.05	T.						.10	.70	T.									5.99
Lost Creek	Monongahela			T.	.64	.06				T.	1.80						.06						T.	.38			T.				T.			2.94
Madison	Great Kanawha			.13	.89		.13		1.45	.80											.60		.26											4.66
Mannington	Monongahela			.01	.56	T.					.37	T.				T.	.01							.44	.05						T.			1.44
Marlinton	Great Kanawha				.38	.25				.38	.50						.05							.03										1.59
Morgantown	Monongahela			T.	.55	.02				T.	T.	.05					.19							.40	.11									1.32
Moundsville	Ohio			T.	.53					T.							.09						T.	.04	.14						.05			0.85
New Cumberland	do				.60						T.						T.						T.	.20	.05									0.85
New Martinsville	do				.79						.35						.18							.30	.70									2.32
Nuttallburg	Great Kanawha	T.		T.	.34	1.25	.12			.80	.47	.45				T.	.05						T.	T.	.22									3.70
Parkersburg	Ohio			.41	.03	T.				.02	.04			T.		.57							T.	.07									1.14
Parsons	Monongahela				.68						2.00						2.94								1.60									7.22
Philippi	do			T.	.78	.05				.02	1.32	.02	T.				.07	.02		T.			T.	1.41	.12	.02	T.							3.83
Pickens	do			.42	.65	.35				.60	.90						2.30						T.	.97	.58									6.77
Pineville	Guyandotte																																	
Point Pleasant‖	Ohio				.31					.34	.44					.06							T.		.14									1.29
Powellton	Great Kanawha				.33	.59	.17			.67	.49	.32					.22						.11	.06	.29	T.									3.25
Princeton	do			.90	.10		.72	.08	1.30	1.30						.90	1.20							2.25										8.75
Robertsburg‖	do				.20					.67	.30																							1.17
Rowlesburg‖	Monongahela				1.02		.04				.78	.24					.32								.78									3.18
Ryan	Great Kanawha			.15	.10					.22	.18						.01							.02										0.68
St. Marys‖	Ohio				.50		T.				.77						.02								.05									1.34
Smithfield‖	Fishing Creek										.21						.19							T.	T.	.67									1.07
Spencer‖	Little Kanawha				.42	T.	T.						.70				T.								T.										1.12
Sutton	Great Kanawha		.60		.10	T.			.35		.10					T.	T.							T.										1.15
Terra Alta	Monongahela										1.86														.95									2.81
Union	Great Kanawha				.36			.20	.12	.32	.93	.14					1.95	.10							.23									4.35
Valley Fork	do					.05				.75		.25																						1.05
Webster Springs	do				T.				T.	.10							2.10							1.25	.20									3.65
Wellsburg	Ohio			T.	.81	.02											T.						.34	.09							.10			1.36
Weston‖	Monongahela				.44	.10					1.00	.22					.22							T.										1.98
Wheeling‖	Ohio				.48	.02	T.					T.					.01								.06						.06			0.63
Williamson‖	Big Sandy				.38		.12	.62	T.	.46	.44												.24		.10									2.36
Ohio																																		
Amesville	Ohio			.30	.52					.03	.04					.31	.04							T.	.02						.02			1.28
Bangorville	Muskingum			.49	.04						T.					.24					.12		T.	.56			T.	.05	.03		.15			1.68
Bellefontaine‖	Miami				.42						.23	T.					.12						.11	.52						T.				1.40

TABLE 2.—*Daily precipitation for September, 1909. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Ohio—Cont'd.																																	
Bladensburg	Muskingum			.43	.23											.25							.05	.08						T.	.10		1.14
Cadiz	Ohio			.72	.26	.03					T.					.06							.03	.43							.09		1.62
California	do			.20						1.05						.13							.04	.06									1.48
Cambridge	Muskingum			.10	.62					.10						.30	.14						.10	.07					.13				1.56
Camp Dennison	Miami			.48						.17	.02					.05							T.	.12					T.				0.84
Canal Dover	Muskingum				.55						.15					.14	.08						.04	.23			T.				.27		1.46
Canton	do				.38	.03					.05						.22							1.00	.12			.06			.08		1.94
Cardington	Scioto																																
Chillicothe	do																																
Cincinnati	Ohio			.21			T.		T.	.98						.09						.02	.02	.07					T.	T.			1.39
Circleville	Scioto				.80						.15						.54						.06		.07					.04	.18		1.84
Clarington	Ohio			.08	.90	.02				1.	T.						.10						T.	T.	.15						.05		1.30
Clarksville	Miami																																
Columbus (1)	Scioto			1.49	T.					.01	T.					.03							.02	.10					.03	.13	T.		1.81
Columbus (2)	do			.75	.42					T.	T.					.05								.07					.05		.18		1.52
Columbus Reservoir	do				1.02									T.		T.								.13			T.		T.		.22		1.37
Coshocton	Muskingum				.66	.01					.32						.66							.19							.28		2.12
Dayton (1)	Miami				.50					.05	.04						.03						.12							.03	.07		0.84
Dayton (2)	do					.50				.03	.02						T.						.08	.03	.02					T.	.02		0.70
Delaware	Scioto			.29	.27	.02				T.	T.					.21							.08	.11		T.	T.		.09	T.	.10		1.17
Demos	Ohio			.02	.41					T.						T.	.07						T.	.07							.06		0.63
Frankfort	Scioto			.80												.45	.15						.15	.12					T.	T.			1.67
Garrettsville	Mahoning				.26	.03				T.	.47					.07							T.	.61			.23	.03		T.	.11		1.81
Granville	Muskingum				.80	T.				T.	T.						.12						.19		.13					.02	.17		1.43
Gratiot	do			.59	.41					T.						.31							.27	.05							.23		1.86
Green	Ohio				.20					.50	1.50					.75						T.	T.	.11									3.06
Greenhill	Muskingum			T.	.24	.06				T.	.09					.24							.11	.19	T.		T.				.20		1.13
Greenville	Miami			.17	.46						.02												T.	.40	.04								1.09
Hillsboro	Scioto			.77						T.	.78					.57							.04	.08									2.24
Ironton	Ohio			.20		.17				.41	.45					.17							.05	.13									1.58
Jacksonburg	Miami					.61				.15					T.	T.				.03			T.							T.			0.79
Kenton	Scioto			.42	.15						.01													.42									1.00
Killbuck	Muskingum			.60	.71	.04					T.					.15								.22									1.72
Lancaster	Scioto			.74	.08					T.						.47	T.			T.			T.							.05			1.34
Lawahe	Ohio			.30			.01			.38	1.40	.01				.16	.03							.02									2.31
McConnelsville	Muskingum			.26	.72					T.	T.					.03	.14														.20		1.35
Marietta	Ohio			.34	.15					.02	.69					.02	.03								.13								1.38
Marion	Scioto			.43	.06											.48							.03	.52			T.		.06	.04			1.62
Milfordton	Muskingum			.51	.72											.26								.07					T.				1.56
Milligan	do			.54							.56					.45								.04									1.59
Millport	Ohio			.01	.17	.05					.05					.17							.08	.21							.22		0.96
Nellie	Muskingum			.20												.45	.16						.16	.21							.25		1.43
New Alexandria	Ohio				.85	T.																	.45							T.			1.30
New Berlin	Muskingum		.40		T.	.05					.55					.38							.04	1.36	.08						.10		2.96
New Richmond	Ohio																																
New Waterford	do				.20						.10						.15						T.		.10						.10		0.65
North Lewisburg	Scioto																																
Orangeville	Mahoning																																
Pataskala	Scioto			.74	.50					T.				T.		.97							.22	.13					.05		.22		2.83
Philo (1)	Muskingum			.21	1.56					T.						.54							.03	.08									2.42
Philo (2)	do			.18	1.40											.70	.26						.04	.08	.01					T.	.14		2.81
Plattsburg	Miami			.65	.16					T.	T.												.24	.03					T.		.15		1.23
Pomeroy	Ohio			.50	.05					.05	.74													.12	.12			T.					1.58
Portsmouth	do				.22					1.15	.45	T.					.14							.04	.01								2.01
Rittman	Muskingum			.22	.02						.80					.20												22					1.46
Shenandoah	do			.30	.08					.16	T.					.86								.49	.19		.21	.15		.06			2.50
Sidney	Miami			.40	.09					T.	.70											T.	.01	.15	.02				.07				1.44
Somerset	Muskingum				1.08						T.						.53						.01		T.					T.	.19		1.81
Springfield	Miami			.67	.09					.01	.12					T.							T.	.25		.01			.01		.08		1.24
Summerfield	Ohio			.26	.71					.03	.02					.10	.12							.05							.10		1.39
Thurman	do			.35						.56	.18					T.							T.	T.									1.09
Urbana	Miami			.52	.28					T.	.18					.05								.68					T.	.06	.04		1.81
Warren	Mahoning				.07					T.	.37					.16								.45			.07			.12			1.24
Waverly	Scioto				.37					.32	.12						.63						T.	.04	.03								1.51
Waynesville	Miami			.68						.28													.08	.02									1.06
Wooster	Muskingum			.10	.35					T.	.04					.80							T.	.21	.08					T.	.15		1.73
Youngstown	Mahoning				.56						.70					.15								.07	.08						.10		1.66
Zanesville	Muskingum				1.17												.35						T.	T.	.01					T.	.36		1.89
Virginia.																																	
Big Stone Gap	Tennessee				.50	.03		.40		.45	.07					.66							.67	.25									3.03
Blacksburg	Kanawha		T.		.43			.29		1.20	.51				.02	1.25		.02	.03	T.		.07	T.	.05									3.87
Burks Garden	Tennessee				1.20	.20		.27		.59	.34						1.98	.30				.10	T.	.35	.17								5.50
Elk Knob	do				.40	.03		.29	.01	.43	.22	T.				.50	.01						.50	.34									2.73
Galax	Kanawha																																
Ivanho	do				.55	.01		.08	.08	.58	.17						.50	.15	.01	.01	.01	.10	.08	.01	1.25		.01	T.					3.60
Marion	Tennessee																																
Max Meadows	Kanawha																																
Mendota	Tennessee	.08			1.01			.12	.20	.15	.20						.08	.10						.50	.18								2.62
Radford	Kanawha				.54	.12		.06	.20	.46	1.28	.10					.44	.28				T.			.20								3.68
Speers Ferry	Tennessee																																
Wytheville	Kanawha			T.	.43			.09	.02	.45	.07					.77	.42						.08	.02	.48								2.83
North Carolina.																																	
Andrews	Tennessee			T.	T.	T.					1.25		.12		.18	.94								.69	.14								3.32
Asheville	do			T.	T.	T.		.13	T.	.03	.10					.78	.57	.11	T.	T.			.04	.82	.01								2.59
Banners Elk	do				.75	.05		.05			.14							.70	1.00				.05	.50	.70								3.94
Brevard	do				T.			T.		.15			.23		.56	.63	.15	.25	.20				.25	1.43	.05								3.90
Bryson City	do				.06						.48		.11			.23	.43	.05						.97	.32	.20								2.85
Hendersonville	do				.01			.02	T.	.16	.05		.06			.55	.98	1.31	.20	.64			.75	1.55	.20								6.48
Hot Springs	do				T.	T.		.19			.68					.20	.61							.98	.35								3.01
Jefferson	do																																
Marshall	do									.21			.30				.72	.08	.17				T.	1.12	1.30								3.90
Murphy	do								T.	.30		1.30	.20		.36		.60		.10				.30	.46									3.62
Rock House	do			.03	T.	.03		.01	.01	.38	.11		.26		T.	1.37	1.96	.21	.03	.06			.87	3.33	1.01								9.67
Sunburst	do																																
Waynesville	do																																
Georgia.																																	
Diamond	Tennessee				.04	T.		.13	T.		.24		.36		T.	T.	.92		T.	.01			T.	1.10	.27								3.07
La Fayette	do				.44	.19			.47		.35					.13	.04						.10	.43									2.15
Alabama.																																	
Albertville	Tennessee																																
Bridgeport	do					.70			T.	1.89	.28						.22						1.06	.02									4.17
Decatur	do	.02			T.				.09	.02	1.20	.20				T.	.91							.13	.15								2.72
Florence	do				.75	.01		.18			1.00				.03	.18							.18										2.33
Guntersville	do				.01	.04			.01		1.22	.12					.42							.02	.70									2.54

TABLE 2.—*Daily precipitation for September, 1909. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Alabama—Cont'd.																																	
Madison	Tennessee			T.	.28	T.		.10	T.		1.40					.12						.22	.25									2.37
Riverton	do			T.		.25			.06		3.34	.08					.50						.60	T.	.04								4.87
Scottsboro	Tennessee			.03	.41	.07		T.			.82					T.	.30			T.			.27									1.90
Tuscumbia	do	.55				.91	.65		.12		1.31	.28					.23						.13									3.58
Tennessee.																																	
Ashwood	Tennessee			T.		.30		.05	.20	.70	1.55					2.50						.65	.30									6.25
Benton	do			T.	.18			.51	.30		.90						.26		.32			T.	.48									2.95
Bird's Bridge‖	do								.15		.42	.09				.56	.05						.27	.28	1.44							3.26
Bluff City‖	do				.64			.06	.24		.32	.16						1.22					.40		.28							3.32
Byrdstown	Cumberland			.05	.04	.01		.11			.18		T.			.14	.02			T.			.47	.30								1.32
Carthage‖	do				.10	.50				20	.57						.60						1.18									3.15
Center Point	Tennessee					.45			.65		2.43												.28	1.00								4.81
Cedar Hill	Cumberland				2.30			.30	T.		1.50					T.							T.									4.30
Celina‖	do				T.	.40		T.	T.		.67						.32				.30		.70									2.39
Charleston‖	Tennessee				T.	.30			.40	.15	1.20						T.			T.			.04	.40								2.49
Chattanooga	do	T.		T.	.51	.01			.29		.34					.14	T.		T.	T.		.06	3.04	.05								4.44
Clarksville	Cumberland				.40	.45		.10			1.80											.38	.04									3.17
Clinton‖	Tennessee				.05	.10	T.	T.	.35	.08	.35					T.	T.				T.		.65	.05								1.63
Dandridge‖	do					.02			.12		.44						.04	.02					.44	.10	.22							1.40
Decatur	do			T.	.30	.02		.01	.10	.03	.85				.01	.01				.07		T.	1.10	.30								2.80
Dickson	Cumberland				.34	.68		.08		1.08												.40	.13									2.71
Dover	do			T.	.20	1.26		.16	T.	T.	1.59				T.	T.						.35		T.								3.56
Dunlap	Tennessee				.63	.06		.12	.87		.37						.03						1.80									3.88
Elizabethton‖	do			.75				.30		.45	T.					.30	.70					.90	.10	.40								3.90
Erasmus	Cumberland			T.	1.16	.04		.04	.24	T.	1.01					.56	.05			.04		T.	1.02	T.								4.16
Florence	do			T.	1.90	.35		T.	.05	.30	.97					.05							.80	T.								4.42
Franklin	do			T.	1.07	.32			.59	.74	1.38					.21						.64										4.95
Hall's Hill‖	do	T.			1.12	.48			T.		.22	.58					.64						.75									3.79
Harriman	Tennessee			.04	.18			.05			.97					.38			.44			2.20										4.26
Hohenwald	do				.54	.15		.15	.12		1.35											.50		.07								2.88
Iron City	do			T.	.40			.37	T.	.09	1.95					.29						.18										3.28
Johnsonville	do			.12	.20	.76		.10	.22	T.	1.50											.40	.02									3.32
Jonesboro	do																															
Kingston‖	do				.15	.30			T.	T.	2.04												1.40	.07								3.96
Knoxville	do			.04	.20	.05	T.	.08	.01	T.	.30					.44			T.				1.79	T.								2.91
Lebanon	Cumberland			T.	1.60	.10		T.	.15	.90	.85					.35				T.		T.										3.95
Lewisburg	Tennessee			.02	.87	.15		T.	.04	1.22	1.00					.82				T.		.56	T.	.17								4.85
Loudon‖	do				T.	T.	T.		.10	T.	.97					T.		.23		.05	T.		1.17	T.	T.							2.52
Lynnville	do	.31		.02	.73	.26		T.	.06	2.60	.92					.78						1.03	.13	.12								6.96
McGhee‖	do					.04				.17	1.10							.08			.02		1.42									2.83
McMinnville	Cumberland				1.54	.07		.01	.47	T.	.85					.89	.01			.04			2.48	.01								6.37
Maryville	Tennessee			.04	.12	.06		.02	.01		.43					.37	.43						1.44	.46								3.38
Mountain City	do	.22			.59	.05		.21		.29	.21					.09	.40	.02					.31	1.05	.19							3.63
Nashville	Cumberland			.02	1.91	.03		T.	.24	.18	1.14					.37						.34	T.	T.								4.23
Newport	Tennessee							.15		.20	.65						.50							.60									2.10
New River‖	Cumberland										.76						.21															0.97
Palmetto	Tennessee	.04		.03	.37	.10		.01	.01	.57	1.00					.60						.50	.14	.06								3.43
Pinewood	do																															
Pope	do			T.		.30		.30	T.	1.80												.50										2.90
Rogersville	do				.60	.01		.04	.28	T.	.46	.10				.04	.88	T.					.72	.06	.50							3.69
Rugby	Cumberland			.05	T.	T.		.23	.45		.15					1.21							1.00	T.								3.09
Savannah	Tennessee																															‡3.50
Sevierville	do			T.	.03	.05		.14	.01		.71					.37	.15	.05	.07	.02			.66	.02								2.28
Sewanee	do				1.41	.51			.85	.37						.83						.38										4.35
Sparta	Cumberland							T.	.40		.81					.60		T.					.25									2.06
Springdale	Tennessee			.06	.05	T.	.07	.40								.40	T.						.43	.30								1.71
Springville	do				.40	.73	.01	.31	.42	.01	1.32					.05						.52	.04	.01								3.52
Tazewell‖	do				.12	T.		.07	.44		.38						.45						.84	.05								2.35
Tellico Plains	do																															
Tullahoma	do	.03		.02	2.31	.26		T.	.54	T.	.79					.37	.19						.84									5.35
Walling‖	Cumberland				.10	2.80				1.01	1.30						.30						.45									5.96
Worsham‖	do				.98	.58	.53									20				.03		.40		.08								2.80
Waynesboro	Tennessee	T.		T.	.91	.19		.52	.05	T.	.57				T.	.32				T.		.60		.11								3.27
Wildersville	do				.25	.28		1.40	.01		1.66											.84										4.44
Yukon	do	.25		.05	2.00				.06	.11	.95				T.	.40				.05		T.	.30									4.17
Kentucky.																																	
Alpha	Cumberland			T.	T.	T.		T.	.10	.30	.67					.33				T.		.50	T.	.75								2.65
Anchorage	Ohio			.21						T.	2.00					.03						T.										2.24
Bardstown‖	Green				.22	.96				.06	.35					T.							.20	.12								1.91
Beattyville‖	Kentucky				.28			T.			.38					T.	.32						.36	.06								1.40
Beaverdam‖	Green			T.	.15			T.	.12		.90					T.							.33	.29								1.79
Berea	Kentucky		T.		.30					.11	1.04					.22							.33									2.00
Bowling Green‖	Green					.41	.61			.15	1.00												.32	.22	T.							2.71
Burnside‖	Cumberland				.04	.01		.24		.04	.26					.14	.50						.22	.14	T.							1.59
Cadiz	do			.15	1.01	.28		.46	T.		.59					.10						.38		.42								3.39
Calhoun	Green			.22	T.	T.		.22	T.	T.	.88					.01						.16		.47								1.96
Catlettsburg‖	Big Sandy				.16	.06					.52	.42	.02				.26							.04	.10	.04							1.62
Earlington‖	Green			.10	.50	.40		T.	.30		.56						.16						.24	.75								3.01
Edmonton	do			.09			.06			.88	.38					1.20	.09						.23									2.93
Eubank‖	Cumberland				.09	.04		.02		.09	.34						.07						.32	.45	.04							1.46
Falmouth‖	Licking			.03	.10					.33	.04	.08					.10						.10		.10							0.88
Farmers	do			T.	T.	.24				.51	1.36					.70	.44						.65	.09								3.99
Frankfort‖	Kentucky			T.	.02					.04	1.60	.01					.23						.03	.07	.03							2.03
Franklin	Green			.40	.95			.07	T.	.03	.73		T.			.14						.28										2.60
Greensburg‖	do			.01						.40							.42						.10									0.91
Highbridge‖	Kentucky				.08						1.64						.66				.08		.06	.50	.04							3.06
Hopkinsville‖	Cumberland				.65	1.25			.85		2.00						.05						.50	.40								5.70
Irvington	Ohio			.25						.41	.17					.09							.38	.05								1.35
Leitchfield	Green			.24	.09			.02		.55												.46		.42								1.78
Lexington	Kentucky			.13	.46			T.		2.07	.07					1.35						.08	.65	.07								4.88
Loretto	Salt			.25	.92				.12		.51	.03											.05	.07								1.95
Louisville	Ohio			.33						1.55	.10					T.						.15	.03	.02								2.18
Marion	do			.38	.23			.55	T.	.79					T.	T.						.20	1.49									3.64
Maysville‖	do				.16					.74	.35						.55								.09							1.89
Middlesboro	Cumberland			.03	.30			.21		.07	.58					.22							.83									2.24
Mt. Sterling‖	Licking				.20	T.				T.	3.05	T.					.64						.14	1.45		.24						5.74
Owensboro‖	Ohio			.12	.21			T.	.10		1.70												.10	.18								2.41
Owenton	Kentucky			.10					T.	.40	.10												.20									0.80
Paducah‖	Ohio			T.	.23	.05		T.	1.90	.25	.55					T.						T.	1.00	.46								4.44
Pikeville‖	Big Sandy				.60			.58		.72	.22						T.						.36		.04							2.52
Richmond‖	Kentucky			T.	.06	T.				.03	.15	.10					.53						.22	.13	.08							1.20
St. John‖	Salt				.44					.22	.27	.14											.17	.13	.03							1.40
Scott	Licking			.22						1.07	.07					.21						T.	.07	.04						T.		1.68
Shelby City‖	Kentucky			.08	.07	T.		.03		.34	.20						1.16	.02					.26									2.16

TABLE 2.—*Daily precipitation for September, 1909. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Kentucky—Cont'd.																																	
Shelbyville	Salt			T.	.09					T.	2.07												.23	.12	.07								2.58
Taylorsville	do			.15						.08	1.29					T.						T.	.54	.02								2.08
Williamsburg	Cumberland					T.		.10	.10		.55					.15	T.						.10	T.	T.							1.00
Williamstown	Licking				.11					.23	.53						.18						.07	.09								1.21
Indiana.																																	
Anderson	West Fork, White			.59	T.				T.	.09						.01					1.39	.03	.17	.46								2.74
Bloomington	do			.16	.12			T.		.14	1.27					T.	T.						.38	.18					T.			2.25
Bluffton	Wabash																																
Butlerville	Muscatatuck			.19						.10	.44											.09	.06									0.88
Cambridge City	Whitewater			.15	.46					.03	.02						.01					.26	.68	.67	.01	T.				.01		1.70
Columbus	East Fork, White			.12	.10					.01	3.40	.10					T.						.28	.93	.01							4.95
Connersville	Whitewater		1.03			T.				.27						T.						T.	.27	.68				T.	T.			2.25
Delphi	Wabash		.77	.01	T.					T.	.16					.12					T.	.22	.77	.90					T.			2.95
Eminence	West Fork, White		.12			T.		T.		T.	1.17	T.				T.						T.	1.00	.65				T.				2.94
Evansville	Ohio	.03	.28			.01	.03	T.	1.43							.02						.36	.10	.04								2.30
Farmersburg	Wabash	T.	.67		T.	T.		T.	.47	.10											.05	.85	T.	.69								2.83
Farmland	West Fork, White		.27	.38						.12							T.				.21	.22	.14	.85	.05	.04			T.			2.28
Greenfield	East Fork, White		.51	T.		T.				.62											.95	.05	.25	1.04	T.			T.				3.42
Greensburg	do		.36			T.				.70	.53					T.						T.	.27									1.86
Heltonville	do		.22	.22						.21				.31									1.35									2.31
Huntingburg	Patoka		.96							.30	.27											.29	.48									2.30
Huntington	Wabash		.67	T.						.45	.10					T.							.15	1.25					T.		.03	2.65
Indianapolis	West Fork, White	.06	.46						.02	.34						T.				.08	.40	.25	.50	.04					T.			2.15
Jeffersonville	Ohio		.36	T.		T.				1.35	.29					.02				T.		.13	.04	.01								2.20
Judyville	Wabash		.41	T.					T.	.55						1.30						• 1.37										3.63
Kokomo	do		.95	T.						.15	.41										.18	T.	.43	1.57								3.69
Lafayette	do		.85	T.	T.					T.	.20					.37					.33	.04	.73	1.15								3.67
Logansport	do		.85	.27							.71					.12							.56	.60								3.11
Madison	Ohio		.13							.14	.45					.33							.18									1.23
Marengo	Big Blue																																
Marion	Mississinewa		.46	.29							.14						.03					T.	.05	.15	2.92							4.04
Markle	Wabash		.80	T.						2.20	.30					T.								3.50								6.80
Mauzy	East Fork, White		.80			T.		T.		.37						T.					.07	T.	.07	.75					T.		T.	2.06
Moores Hill	Ohio		.25	T.						.50	.32					.01						T.	.13	.02								1.23
Mt. Vernon	do		.16	.20				.03	.34		.58					.02						•	.80	.50								2.63
Paoli	East Fork, White		.64							.29	.35												.22	.17								1.67
Princeton	Patoka	.46								.95												.55		.20								2.16
Richmond	Whitewater		.50	T.					T.	T.						T.							.31	.43					T.	T.		1.24
Rochester	Tippecanoe		.75	T.					T.	.25	.05					.47						.34		1.38	.70	.02				T.			3.96
Rockville	Wabash	T.	.29	T.					T.	.44	T.					T.					T.	.68	.44	.13								1.98
Rome	Ohio		.87	.02			T.			.53	.38										.04	T.	.32	.12								2.28
Salamonia	Salamonia		.55	.04						T.		.06				.02					.20		.06	.72	.07				T.			1.72
Salem	Big Blue		.38							.14	.16					.01						T.	.44	.02								1.15
Scottsburg	Muscatatuck																																
Seymour	East Fork, White		.18			T.		T.	1.96	.51						.06						T.	.36	.02								3.09
Shelbyville	do		.54	T.		T.		T.	.07	T.						.02					.01	.01	.35	.97	T.							1.97
Terre Haute	Wabash		.70					T.	2.00												T.	.46	.50	.40								4.06
Veedersburg	do		.33	T.				T.		.40				T.		.08						.21	1.10	.68								2.80
Vevay	Ohio		.20							.35	.05					T.							.10	.05								0.75
Vincennes	Wabash		.90				T.			.50	.70					.05							1.00	.20								3.35
Washington	West Fork, White		1.03					.03		.40		.04				.01							.51	.28								2.30
Whitestown	do		.66													T.					.65	.07	.43	.86	T.							2.67
Winona Lake	Tippecanoe		.31	.03			T.	.06	.08						.35						.02	T.	1.04	.74	.12	.01				.04		2.80
Worthington	West Fork, White		.47	T.		T.				T.		.13				T.					.10	.53	.44									1.67
Illinois.																																	
Albion	Wabash		.43				.63			2.70						.33						1.02	.11									4.62
Charleston	do	.37	.37			.01		T.		.39					.19	.19						1.78	.05									3.35
Equality	Ohio																																
Fairfield	Wabash		.27							.40	1.98											1.25	.10	.10								4.10
Flora	do		.37			T.	T.	T.	3.37	.09				T.		.10						1.52	.13	.21								5.79
Golconda	Ohio		.16	.17	.04		1.61	T.		1.36						T.						1.11		.70								5.15
Hoopeston	Wabash		.50					T.	.06												.09	.95	.55	.18								2.33
McLeansboro	do		.23				.45	.24	T.	.83							T.						1.40	.57								3.72
Martinsville	do	.10	.50			T.			.70							.20						1.38										2.88
Mt. Carmel	do		.50						.70	.30						.14							1.30	.22								3.16
New Burnside	Ohio		.16		.14		.85			1.75												T.	1.80	.77								5.47
Olney	Wabash		.70			T.			1.47						.04							1.69	.04									3.94
Palestine	do	T.	.90																			.75	.18									1.83
Paris	do		.56				T.			.57	.10					.12					.12		1.49	.18								3.14
Philo	do	.05	.60					T.		T.												1.48	.55									2.68
Rantoul	do		.31		T.					.01	T.					.32							1.41	.31								2.36
Robinson	do	1.05							.63	.15										.15		1.57		.30								3.85
Sumner	do		.71							.81												1.25	.11									2.88
Tuscola	do																																
Urbana	do	.18	.18	T.		T.		T.	T.					T.	.16							1.41	.34	.09								2.36

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 3, Ohio Valley.*

Date.	Pennsylvania.				West Virginia.																Ohio.							
	Greensville.		Pittsburg.		Charleston.		Elkhorn.		Elkins.		Glenville.		Huntington.‡‡		Morgantown.		Parkersburg.		Wheeling.‡‡		Canton.		Cincinnati.		Columbus.		Dayton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	67	50	69	53	82	58	79	57	67	45	85	55	74	58	73	54	67	52	69	54	61	51	69	50	66	46	71	45
2...	75	33	71	45	75	44	75	40	69	41	76	42	78	43	72	43	73	43	73	42	70	39	75	51	74	44	74	40
3...	79	44	73	55	75	50	78	44	77	40	78	46	76	48	76	47	72	51	70	44	71	51	70	58	64	54	70	51
4...	71	58	76	60	80	62	78	58	77	58	87	60	86	53	75	59	81	62	78	51	73	57	79	66	75	60	76	56
5...	67	52	67	53	80	63	76	46	68	44	77	65	75	63	72	57	70	54	74	62	64	56	71	58	68	53	72	58
6...	75	34	75	44	72	47	76	44	75	41	75	45	72	45	75	41	69	48	74	44	70	39	67	53	67	49	68	46
7...	76	37	76	54	78	50	77	47	75	50	79	51	81	55	75	54	75	55	73	45	73	44	77	59	76	56	80	53
8...	81	40	79	53	82	50	78	48	81	44	86	48	87	47	83	47	82	49	80	52	77	47	82	56	80	56	84	52
9...	73	52	79	61	82	62	77	59	75	52	75	57	79	50	80	59	71	61	78	52	77	57	79	66	77	64	77	58
10...	79	62	80	65	78	67	73	62	78	63	83	61	82	65	85	65	81	67	82	53	78	65	82	69	78	65	85	64
11...	79	54	80	59	82	65	80	67	82	60	84	63	85	64	79	57	81	64	78	59	75	56	82	65	79	63	87	58
12...	85	48	83	61	86	64	79	60	82	56	87	60	89	61	84	64	88	61	84	57	81	53	90	62	86	57	88	56
13...	91	56	87	68	85	65	81	57	84	61	88	61	88	65	87	64	87	65	87	53	85	59	90	67	88	66	90	61
14...	92	57	87	70	87	66	79	56	84	57	89	63	88	64	88	63	89	65	87	64	86	63	90	69	87	67	90	62
15...	87	63	85	67	84	69	79	57	85	53	88	56	84	62	86	69	85	64	87	62	81	65	80	63	80	61	81	69
16...	75	50	76	60	90	63	76	64	70	61	79	65	80	65	75	69	77	62	89	63	70	54	78	56	76	53	79	50
17...	78	38	78	52	81	59	77	63	78	52	82	57	81	53	78	49	78	52	78	44	74	46	80	57	76	55	83	46
18...	77	40	77	54	80	55	79	56	78	48	85	50	84	53	80	52	78	59	79	48	72	51	80	60	76	56	83	53
19...	82	45	80	59	83	60	76	56	78	51	85	56	87	52	78	61	84	57	83	53	81	52	87	56	84	54	88	50
20...	82	56	78	60	82	60	70	55	77	48	83	53	83	57	75	56	81	59	81	54	79	59	84	66	82	62	87	56
21...	82	46	82	56	82	58	72	60	76	50	83	50	80	53	81	51	79	56	82	52	79	53	76	62	77	58	76	59
22...	81	62	81	66	81	69	75	65	76	63	83	60	86	55	83	65	83	71	82	53	78	61	88	69	84	67	88	64
23...	80	55	83	58	82	66	79	60	81	57	84	59	82	65	85	60	82	57	84	64	72	63	74	55	71	52	68	62
24...	69	37	66	52	78	58	71	54	66	41	72	53	70	52	66	53	68	50	69	55	64	50	71	50	68	47	73	41
25...	67	40	65	44	70	48	66	40	66	37	72	42	71	43	65	39	68	45	70	43	62	47	67	49	66	44	69	39
26...	59	34	60	46	70	47	68	39	60	40	68	42	65	46	64	42	62	47	61	42	56	39	62	45	59	41	63	38
27...	63	33	62	44	62	40	62	33	57	38	66	38	65	39	61	43	63	12	65	40	59	42	64	42	62	40	65	35
28...	66	28	63	39	63	40	63	35	60	32	67	34	67	37	63	35	66	39	65	35	61	34	68	43	64	40	67	32
29...	73	40	73	51	75	42	66	36	75	34	78	36	77	42	75	48	76	49	75	36	71	41	78	51	76	48	79	39
30...	55	44	58	47	75	52	66	34	61	50	71	50	68	49	71	47	62	49	62	46	57	41	66	49	61	43	64	39
31...																												
Mns	75.5	46.3	75.0	55.2	78.7	56.3	74.4	51.7	74.0	48.9	79.8	52.6	79.0	53.3	76.3	54.1	75.9	55.2	76.6	50.7	71.9	51.2	76.9	57.4	74.2	54.0	77.5	51.1

Date.	Ohio.				Virginia.								Tennessee.															
	Marion.		Waverly.		Big Stone Gap.		Wytheville.		Asheville, N. C.		Decatur, Ala.‡‡		Chattanooga.		Jonesboro.		Knoxville.		Nashville.		Palmetto.		Sparta.		Waynesboro.		Beattyville, Ky.‡‡	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	75	42	73	49	78	61	75	55	79	56	91	62	90	67	.....	.....	84	61	83	63	92	67	85	50	92	67	79	55
2...	78	39	78	39	77	44	78	44	80	46	88	58	85	61	.....	.....	80	54	86	55	92	48	85	49	92	57	79	41
3...	66	53	70	43	75	48	78	41	74	48	91	58	78	59	.....	.....	69	55	79	63	78	63	81	58	86	62	77	49
4...	72	56	84	43	80	58	76	58	82	60	79	65	72	65	.....	.....	74	63	79	68	75	68	75	66	83	71	84	56
5...	73	63	75	43	73	67	72	49	74	60	81	57	81	66	.....	.....	78	64	78	67	81	68	80	63	83	68	79	63
6...	72	43	71	43	76	49	70	42	72	55	88	53	81	64	.....	.....	81	61	84	60	86	57	83	56	85	68	79	44
7...	79	44	81	50	70	59	69	54	69	54	89	68	75	67	.....	.....	70	63	74	66	81	66	86	67	85	64	82	50
8...	84	49	86	46	80	50	77	53	76	60	83	69	76	66	.....	.....	80	62	86	65	81	67	78	64	83	68	88	49
9...	81	52	75	52	75	66	66	59	76	62	91	69	88	69	.....	.....	82	69	88	69	93	69	80	65	91	68	86	55
10...	80	63	86	64	75	66	73	62	77	64	84	68	86	68	.....	.....	82	67	86	66	88	65	82	66	87	67	81	63
11...	83	58	85	60	81	61	80	60	83	60	89	65	86	67	.....	.....	84	62	88	69	89	67	86	65	88	66	87	62
12...	87	50	88	57	82	63	76	64	78	66	89	66	85	67	.....	.....	86	65	90	67	92	64	88	62	91	63	89	58
13...	93	61	92	61	83	60	80	56	79	61	86	68	85	67	.....	.....	85	66	86	69	87	67	86	62	85	70	91	62
14...	91	62	93	63	82	61	76	57	80	57	86	67	84	66	.....	.....	85	64	84	67	86	64	86	63	84	65	89	62
15...	81	62	90	64	73	60	81	55	74	63	87	68	83	68	.....	.....	76	68	84	70	83	68	84	65	85	65	83	62
16...	79	48	81	56	75	66	70	64	75	65	80	67	82	70	.....	.....	79	68	79	65	82	65	78	65	80	60	89	64
17...	82	50	83	47	77	64	79	64	77	65	82	60	85	65	.....	.....	83	66	82	57	85	56	75	65	81	51	82	54
18...	83	48	82	50	82	58	75	63	76	62	87	60	86	65	.....	.....	86	65	86	58	87	56	86	58	86	52	86	51
19...	88	45	89	53	79	57	74	60	70	61	85	61	82	67	.....	.....	86	65	86	67	89	63	84	63	86	62	91	55
20...	89	61	86	58	78	54	70	56	65	56	82	71	81	65	.....	.....	82	63	82	66	82	64	84	61	80	69	87	51
21...	79	56	80	54	78	55	69	57	69	58	83	69	76	63	.....	.....	82	62	80	66	81	67	80	56	79	67	84	53
22...	87	66	89	56	77	64	75	60	76	65	87	70	83	68	.....	.....	81	66	87	71	86	68	83	60	86	68	88	57
23...	75	58	78	63	78	63	79	60	80	62	80	68	83	63	.....	.....	83	62	75	59	77	63	80	60	74	58	77	62
24...	74	42	75	47	69	58	66	49	67	51	71	50	73	58	.....	.....	71	55	71	53	73	47	75	49	70	46	74	47
25...	69	40	78	40	67	44	65	41	69	43	70	43	72	56	.....	.....	71	50	71	51	74	43	71	43	72	41	74	41
26...	62	39	68	42	62	42	62	40	66	40	70	65	71	55	.....	.....	66	49	69	53	72	42	67	49	68	45	70	40
27...	65	39	67	37	56	39	57	40	57	40	69	47	64	50	.....	.....	60	46	66	48	70	40	61	43	63	43	64	36
28...	67	32	72	31	62	35	61	36	61	38	60	40	69	46	.....	.....	66	40	70	46	72	38	68	38	69	35	73	35
29...	70	48	79	43	70	38	71	37	73	35	78	40	76	45	.....	.....	74	43	77	45	78	39	74	39	75	37	81	37
30...	70	38	70	40	73	40	70	44	71	44	80	43	80	49	.....	.....	76	49	79	54	84	46	77	41	81	43	75	42
31...																												
Mns	77.8	50.2	80.7	49.8	74.8	55.0	72.3	52.7	73.5	55.3	82.2	60.5	79.9	62.4	.....	.....	78.1	59.8	80.3	61.4	82.5	58.8	79.6	57.0	81.7	58.9	81.6	51.9

TABLE 3.—*Maximum and minimum temperature at selected stations, September, 1909. District No. 3*—Continued.

Date.	Kentucky.														Indiana.												Philo, Ill.	
	Bowling Green. ‡‡		Earlington. ‡‡		Greensburg. ‡‡		Lexington.		Louisville.		Maysville. ‡‡		Williamsburg. ‡‡		Butlerville.		Evansville.		Indianapolis.		Kokomo.		Rockville.		Worthington.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	86	60	80	.....	77	54	68	53	73	56	76	53	84	60	79	48	75	58	68	46	67	43	73	47	75	50	69	47
2...	90	50	89	.....	81	40	74	47	82	52	79	44	83	45	78	45	81	54	73	48	74	39	74	46	78	44	76	41
3...	85	51	86	.....	75	47	71	59	80	62	74	44	75	47	79	58	88	60	78	56	68	54	82	56	85	57	85	56
4...	82	71	87	.....	90	57	84	66	88	71	87	55	84	60	84	66	87	71	72	64	69	62	80	64	83	65	73	61
5...	81	65	82	.....	77	65	70	54	75	58	76	58	77	66	75	58	75	60	68	55	69	50	69	55	75	55	69	56
6...	84	61	82	.....	87	45	70	49	72	53	72	45	80	52	66	46	76	55	66	52	70	47	64	52	67	49	67	43
7...	72	55	.....	.....	74	45	75	57	80	59	73	47	70	54	80	54	74	60	76	54	75	46	76	53	79	55	76	55
8...	88	61	83	.....	88	55	83	55	84	58	87	48	82	60	84	55	80	63	79	57	78	49	78	56	81	54	79	55
9...	90	67	92	.....	84	57	83	64	88	68	84	50	84	61	83	66	88	67	75	64	77	62	77	65	83	70	80	59
10...	89	68	86	.....	87	56	79	65	82	67	85	65	80	64	81	64	84	67	80	64	78	64	80	64	85	67	82	62
11...	92	65	91	.....	90	61	81	63	85	64	90	62	85	64	85	62	86	65	82	60	81	54	82	60	85	60	83	56
12...	93	64	93	60	97	50	87	63	92	65	94	59	89	64	91	61	90	70	87	60	84	54	86	62	89	62	88	59
13...	91	65	92	67	95	50	86	68	90	72	94	64	86	64	92	69	88	73	87	67	87	60	87	66	89	65	90	59
14...	90	64	91	63	94	53	86	68	90	68	94	62	86	63	90	64	87	70	86	68	85	60	86	66	89	64	87	65
15...	85	65	75	67	89	61	80	64	80	62	90	62	83	65	86	63	76	64	73	57	73	60	75	57	80	66	73	55
16...	87	61	82	52	87	58	75	58	79	56	84	57	80	66	80	49	77	55	74	51	72	45	74	47	80	48	75	46
17...	90	53	88	.....	85	47	76	56	82	56	87	53	84	62	86	45	82	55	78	53	77	46	80	50	85	45	81	46
18...	83	53	91	.....	91	40	78	58	85	58	84	53	90	59	85	57	85	61	79	58	78	51	81	58	83	54	82	54
19...	93	60	93	.....	95	50	84	59	88	60	92	52	86	60	90	56	88	64	83	52	81	46	84	54	88	53	82	53
20...	90	62	91	62	92	56	81	63	88	68	88	55	84	59	85	68	86	71	82	65	82	57	83	65	85	63	85	61
21...	84	64	78	63	85	61	79	61	82	66	80	53	84	59	80	63	78	63	76	64	71	60	73	65	77	67	75	63
22...	91	65	93	62	95	61	82	69	90	68	87	53	82	64	90	66	87	65	84	61	83	63	82	64	88	65	82	58
23...	73	62	73	58	75	63	68	52	75	57	74	63	80	67	83	58	70	55	65	52	75	53	71	53	80	57	66	48
24...	73	45	74	.....	75	42	67	45	71	49	76	47	75	52	73	37	71	49	67	48	68	39	68	43	73	41	67	40
25...	76	47	73	.....	75	40	65	46	68	50	73	41	71	45	70	40	67	49	64	45	65	37	64	42	69	40	66	38
26...	73	46	71	46	68	41	60	44	65	46	68	42	68	44	65	42	64	47	59	42	61	36	61	42	67	43	61	40
27...	70	41	68	41	62	39	59	38	62	42	69	37	62	39	65	37	62	42	60	40	62	35	61	37	65	34	63	36
28...	76	40	74	36	72	32	65	41	70	45	74	36	70	39	69	32	68	46	66	38	66	32	67	38	70	33	69	33
29...	81	45	81	37	79	34	73	47	78	52	79	37	80	40	80	49	77	52	72	49	68	51	73	50	78	49	75	48
30...	82	48	79	49	76	38	66	50	71	51	72	41	79	44	71	48	71	51	66	42	65	39	67	41	72	38	68	37
31...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	84.1	57.5	83.4[a]	.....	83.2	49.9	75.2	56.1	79.8	58.6	81.4	51.3	80.1	56.3	80.1	54.2	78.9	59.4	74.2	54.4	73.6	49.8	75.3	53.9	79.4	53.8	75.8	51.0

Climatological Data for September, 1909.

DISTRICT No. 4, LAKE REGION.

Prof. HENRY J. COX, District Editor.

The month of September in Climatological District No. 4 was marked by no storms of exceptional severity, and the extremes of temperature were such as are usually experienced during this period.

TEMPERATURE.

Except in a few small areas the mean temperature was slightly below the normal for the season. The greatest average departures occurred over the southern portion of the Lower Peninsula of Michigan, northern Indiana, and northern Ohio, being—2.1°, —2.4°, and —2.9°, respectively. The month opened with low temperature, and frosts occurred generally from Ohio westward. These frosts were heavy in localities of Michigan, and killing at the more exposed stations of northern Wisconsin. After this cool period, the temperature gradually rose, and the maximum heat of the month was experienced in nearly all portions of the district on the 14th. During the last week of the month, the temperature was again low, and frosts occurred generally. Owing to the lateness of these general and severe frosts, no resulting damage of consequence was reported from any section of the district.

PRECIPITATION.

The precipitation was also below the normal for the month, being about two-thirds of the normal amount in all portions of the district, except in the extreme western Lake Superior region, where nearly normal conditions prevailed. The rainfall was well distributed throughout the month over the entire district, at intervals of about six days, the most extensive rainy periods occurring from the 10th to the 16th over the western and middle portions, and from the 23d to the 30th over the eastern sections. No twenty-four-hour rainfalls of 3 inches or more occurred at any station, and generally the greatest falls for this period were less than 2 inches.

Northern Indiana experienced the severest storm of the month, which occurred on the 21st to 23d, accompanied by high winds and thunderstorms. During the passage of this disturbance several small buildings in the vicinity of Fort Wayne were destroyed.

Nearly normal conditions prevailed as to to cloudiness and sunshine.

TABLE 1.—*Climatological data for September, 1909. District No. 4, Lake Region.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota.																				
Duluth	St. Louis	1,133	38	54.9	− 1.8	75	21	37	24	29	3.28	− 0.27	2.64	0.0	8	14	6	10	ne.	U. S. Weather Bureau.
Floodwood	do	1,257	5	57.0[d]	.....	78[e]	10†	28[d]	5	43[d]	.....	.....	1.72	0.0	4	16[e]	9[e]	2[e]	se.	M. H. Schussler.
Mount Iron	do	1,510	15	54.8	+ 0.4	77	3	26	24	40	4.00	− 0.48	2.90	0.0	8	9	15	6	nw.	Oliver Iron Mining Co.
Stephens Mine	do	.....	2	53.2	.....	77	8	25	24	43	3.11	.....	1.03	0.0	8	18	6	6	sw.	Do.
Two Harbors	Lake	692	15	56.2	0.00	77	16	34	23†	33	6.65	+ 2.23	2.90	0.0	6	19	8	3	ne.	Geo. W. Watts.
Wisconsin.																				
Appleton	Outagamie	795	10	59.2	− 2.6	85	20	30	27	37	2.09	− 0.82	0.63	0.0	10	15	2	13	e.	J. L. Mead.
Ashland	Ashland	647	15	58.4	− 1.2	82	21	31	25†	46	2.93	− 0.29	1.38	0.0	6	17	10	3	ne.	Sam Wheeler.
Cecil	Shawano	804	2	60.4	.....	84	13†	26	26	42	1.81	.....	0.63	0.0	5	18	7	5	sw.	L. W. Schmidt.
Chilton	Calumet	860	15	59.5	− 2.1	85	13	34	27	32	2.20	− 1.15	0.70	0.0	12	12	14	4	se.	D. V. Jones.
Crandon	Forest	1,060	12	55.4	− 1.4	74	8	24	26	39	2.88	− 0.88	2.10	0.0	6	20	5	5	w.	A. L. Emde.
Florence	Florence	1,293	17	53.8[e]	− 2.6	80[e]	13	23[e]	27	40	2.32	− 1.31	1.53	0.0	6	22	1	7	nw.	F. S. Evans.
Fond du Lac	Fond du Lac	800	23	60.2	− 0.7	88	13	29	27	39	2.29	− 0.67	0.83	0.0	11	14	4	12	sw.	Geo. W. Marshall.
Grand River Locks	Marquette	616	1	59.2	.....	85	13	23	27	40	2.49	− 1.69	1.20	0.0	7	21	3	6	w.	Jerry Parkinson.
Green Bay	Brown	617	23	59.8	+ 0.7	84	13	37	27	27	2.68	− 0.44	1.04	0.0	8	9	9	12	sw.	U. S. Weather Bureau.
Herbster	Bayfield	700	1	.....	.....	80[f]	20†	.....	.....	.....	.....	.....	.....	0.0	.....	13[f]	8[f]	3[f]	w.[f]	Wm. Angell.
Iron River	Bayfield	1,096	....	58.2	.....	80	11	35	1†	38	2.39	.....	1.00	0.0	7	14	5	11	sw.	Harry C. Hale.
Kewaunee	Kawaunee	590	....	59.1	.....	81	14	40	26†	30	2.33	.....	0.90	0.0	9	14	6	10	s.	Eugene V. Kimball
Manitowoc	Manitowoc	616	59	59.2	+ 0.4	82	14	40	27	27	3.12	+ 0.12	1.10	0.0	10	9	9	12	s.	Johanna Lups.
Menasha	Winnebago	764	12	.....	.....	.....	.....	.....	.....	.....	2.59	− 0.77	1.22	0.0	8	24	3	3	se.	George T. Allanson.
Menomonee Falls	Waukesha	842	....	59.8	.....	86	13	36	2	37	2.77	.....	1.04	0.0	9	12	10	8	s.	S. H. Christman.
Milwaukee	Milwaukee	681	39	61.6	+ 0.1	86	13	43	1	22	3.39	+ 0.47	1.50	0.0	10	15	10	5	w.	U. S. Weather Bureau.
New London	Outagamie	762	13	59.8	− 0.4	84	13	32	27	34	3.87	+ 0.45	1.47	0.0	9	16	5	9	nw.	A. H. Pape.
Oconto	Oconto	590	18	59.1[a]	− 1.5	85[a]	13	32[a]	27	37	2.08	− 1.04	0.70	0.0	7	14	11	5	n.	W. K. Smith.
Oshkosh[d]	Winnebago	744	20	58.0	− 4.5	83	20	30	27	34	1.91	− 0.81	0.65	0.0	7	18[a]	9[a]	2[a]	sw.	Evan Vincent.
Pine River	Waushara	900	14	59.5	− 1.3	83	20	32	26†	33	3.47	+ 0.59	1.65	0.0	10	7	18	5	se.	G. H. Carpenter.
Plum Island	Door	588	1	57.6	.....	74	6	43	27	24	1.84	.....	0.82	0.0	10	7	10	13	s.	John P. Whelan.
Port Washington	Ozaukee	713	16	61.0	0.00	82	14	41	1†	28	3.57	+ 0.44	1.12	0.0	8	14	6	10	se.	R. C. Kann.
Racine	Racine	633	12	61.8	− 2.4	85	14	40	27	29	3.48	− 0.38	1.63	0.0	10	13	7	10	nw.	Daniel Davis.
Sheboygan	Sheboygan	831	9	60.6	− 1.2	81	14	40	27	24	3.00	− 0.26	1.28	0.0	11	11	10	9	se.	Louis C. Meyer.
Sturgeon Bay	Door	600	11	58.8	− 3.0	79	13	35	1	28	2.24	.....	0.90	0.0	11	14	9	7	s.	Adam N. Dier.
Superior‡‡	Douglas	671	....	55.6	.....	78	21	32	1	43	3.52	.....	2.07	0.0	6	16	6	8	ne.	E. B. Banks.
Waupaca	Waupaca	857	13	59.2	− 1.4	85	13	28	27	40	3.65	+ 0.31	1.93	0.0	9	10	8	12	sw.	J. H. Flagg.
Illinois.																				
Chicago	Cook	824	39	64.0	− 0.6	89	13	47	28	20	3.60	+ 0.58	1.41	0.0	8	10	12	8	ne.	U. S.Weather Bureau.
Indiana.																				
Auburn	Dekalb	874	6	59.8[a]	.....	90[a]	13	31	28	41[a]	2.64	.....	2.03	0.0	9	15	3	12	sw.	Mrs. Josie Kuhlman.
Elkhart‡	Elkhart	801	....	62.8[b]	.....	91[b]	12	38[b]	27	35[b]	2.92	.....	0.84	0.0	10	14[b]	6[b]	8[b]	e.	Miles Medical Co.
Fort Wayne	Allen	775	5	62.5	.....	90	13†	34	28	39	3.60	.....	1.30	0.0	6	12	9	9	sw.	O. E. Mohler.
Hammond	Lake	598	12	64.4	− 1.0	92	13	38	30	46	1.35	− 1.35	0.55	0.0	3	5	17	8	.....	C. W. Whitney.
Lima	Lagrange	886	....	60.9	.....	91	13	36	27†	38	3.21	.....	1.40	0.0	6	18	2	10	e.	Jas. E. Zook.
South Bend	St. Joseph	726	10	61.8	− 3.9	90	13	34	27	34	3.00	+ 0.10	1.08	0.0	10	14	5	11	se.	H. H. Swaim.
Michigan.																				
Adrian	Lenawee	707	31	62.8	− 0.1	94	13	34	30	43	1.43	− 2.03	0.45	0.0	5	7	14	9	s.	B. F. Gibbs.
Agricultural College	Ingham	820	45	60.4	− 0.8	89	13†	33	1	36	1.51	− 1.27	0.79	0.0	7	21	4	5	w.	Prof. A. J. Patten.
Allegan	Allegan	698	18	63.8	+ 1.2	93	12	34	27	41	3.64	+ 1.15	1.22	0.0	8	12	12	6	w.	Agent, P. M. R. R.
Alma	Gratiot	750	22	59.2	− 1.5	91	13†	33	2	40	3.59	+ 0.19	1.30	0.0	8	7	16	7	s.	P. M. Smith.
Alpena	Alpena	609	36	56.2	− 1.1	89	14	36	25	40	1.86	− 1.62	0.94	0.0	12	7	11	12	nw.	U. S. Weather Bureau.
Ann Arbor	Washtenaw	930	29	61.1	− 1.6	91	13	37	28	37	0.92	− 1.65	0.56	0.0	7	11	8	11	w.	University of Michigan.
Arbela	Tuscola	728	13	60.4	− 1.5	94	13	32	28	44	1.30	− 1.61	0.86	0.0	3	0	21	9	nw.	Wm. Atkin.
Ball Mountain	Oakland	983	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. N. Hilton.
Baraga[a]	Baraga	623	7	56.4	.....	85	13	29	26	42	.....	.....	.....	0.0	.....	10	0	19	s.	Agent, D. S. S. & A. Ry.
Battle Creek	Calhoun	822	25	60.4	− 3.4	89	13	36	28	36	2.74	− 0.08	1.15	0.0	9	16	7	7	nw.	Elmer E. Sager.
Bay City	Bay	593	13	60.6	− 1.3	92	13	37	28	38	2.65	− 0.88	2.00	0.0	4	19	9	2	ne.	Agent, P. M. R. R.
Benzonia	Benzie	832	13	58.7	+ 0.5	85	20	36	2	33	2.95	− 0.41	1.60	0.0	6	14	10	6	nw.	M. S. Joiner.
Berlin	St. Clair	.....	20	58.8	− 3.0	91	13†	29	28	44	1.00	− 1.85	0.45	0.0	7	8	11	11	sw.	R. O. Gould.
Big Rapids	Mecosta	906	13	58.6	− 1.0	89	14	30	2	42	2.28	− 1.09	1.39	0.0	10	16	9	5	nw.	Charles Gay.
Blaney	Schoolcraft	.....	2	53.8	.....	85	9	24	2	46	1.38	.....	0.65	0.0	7	12	11	7	sw.	Dr. S. S. Hackwell.
Bloomingdale[a]	Van Buren	.....	5	60.4	.....	88	13	35	27	34	3.05	.....	1.50	0.0	7	21	3	6	se.	John M. Haven.
Cadillac	Wexford	1,378	....	59.0	.....	87	14	35	26†	34	2.28	.....	1.17	0.0	7	15	7	8	n.	A. J. Teed.
Calumet	Houghton	1,246	21	55.0	− 0.4	82	20	35	26	30	2.00	− 1.74	0.60	0.0	11	14	10	6	w.	E. S. Grierson.
Cassopolis	Cass	903	8	61.7	.....	88	13	37	26	31	2.48	− 0.83	1.20	0.0	7	26	0	4	nw.	Agent, M. C. R. R.
Charlevoix	Charlevoix	610	22	58.7[b]	− 2.0	86[b]	14	38[b]	1	36[b]	1.84	− 1.53	0.80	0.0	5	17	9	4	nw.	Agent, P. M. R. R.
Charlotte	Eaton	.....	5	59.5	.....	88	13	34	28	36	1.81	− 1.83	0.78	0.0	7	9	14	7	sw.	City of Charlotte.
Chatham	Alger	875	8	52.4	.....	80	13	23	26†	40	2.01	.....	1.32	0.0	6	16	2	12	s.	U. P. Express Station.
Cheboygan	Cheboygan	611	19	58.0	− 1.9	87	13†	34	28	35	2.25	− 0.81	1.00	0.0	5	11	10	9	w.	E. A. Bouchard.
Clinton	Lenawee	830	19	62.2	− 1.5	92	13	35	6†	47	1.54	− 1.15	0.67	0.0	7	17	11	2	nw.	David Woodward.
Coldwater[b]	Branch	984	12	61.6	− 2.7	89	13	35	28	37	2.10	− 1.23	1.06	0.0	6	21	2	5	s.	Agent, L. S. & M. S. Ry.
Concord	Jackson	.....	4	59.8	.....	89	13	36	26	34	1.95	.....	1.10	0.0	3	16	14	0	nw.	J. S. Arthur.
Croton	Newago	681	1	60.6	.....	89	14	32	27	35	1.90	.....	1.25	0.0	6	4	24	2	w.	G. R. M. Power Co.
Deer Park	Luce	610	8	55.3	.....	81	21	34	28	30	1.51	− 1.89	0.40	0.0	7	12	2	16	s.	Mrs. Sarah E. McGaw.
Detour	Chippewa	585	9	55.3	− 2.7	75	14	36	28	24	3.65	.....	0.96	0.0	11	14	16	0	se.	Nelson Abear.
Detroit	Wayne	730	38	61.4	− 1.7	87	13	39	28	27	0.75	− 1.73	0.43	0.0	8	10	11	9	n.	U. S. Weather Bureau.
Durand	Shiawassee	799	2	60.5[a]	.....	92	13	35[b]	28	43[b]	0.97	.....	0.64	0.0	3	15	8	7	sw.	Agent, C. T.Dis.G.T.Ryt
Eagle Harbor	Keweenaw	622	10	55.5	− 0.5	81	13	38	7†	29	1.71	− 2.03	0.50	0.0	9	12	15	3	w.	John Nolen.
East Tawas	Iosco	790	12	56.8	− 3.6	78	14†	34	30	41	2.85	+ 0.65	1.00	0.0	7	21	9	0	sw.	Agent, D. & M. Ry.
Eloise	Wayne	640	12	61.9	− 2.3	92	13	30	30	36	1.55	− 1.29	0.60	0.0	4	16	6	8	nw.	Wayne Co. House.
Escanaba	Delta	612	36	55.0	− 1.9	75	13	34	27	32	1.48	− 2.10	0.68	0.0	10	10	6	14	s.	U. S. Weather Bureau.
Ewen	Ontonagon	1,147	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. B. Hatfield.
Flint	Genessee	730	20	58.4[e]	− 3.1	91[f]	13†	32	28	39[f]	0.85	− 1.92	0.30	0.0	7	18	3	9	w.	Wm. L. Fisher.
Frankfort	Benzie	589	5	58.2	− 3.7	82	21	42	2	21	3.65	.....	1.50	0.0	7	14	0	16	n.	Capt. G. Morency.
Ganges	Allegan	665	....	60.7	.....	86	13†	36	27	28	2.76	.....	1.02	0.0	9	19	5	6	nw.	H. H. Hutchins.
Gaylord	Otsego	1,367	5	.....	.....	86	14	.....	.....	.....	.....	.....	.....	0.0	.....	20	0	10	sw.	Agent, M. C. R. R.
Gladwin	Gladwin	794	13	59.2	0.00	94	14	28	2	45	4.55	+ 1.90	1.25	0.0	5	22	5	3	s.	Geo. R. Smith.
Grand Haven	Ottawa	628	28	59.1	− 2.0	83	20	35	26	27	2.20	− 0.97	1.31	0.0	11	12	11	7	nw.	U. S. Weather Bureau.
Grand Marais	Alger	610	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Lena Truedell.
Grand Rapids	Kent	707	20	60.6	− 1.2	89	13	37	27	29	2.11	− 1.01	1.04	0.0	8	10	9	11	nw.	U. S. Weather Bureau.
Grape	Monroe	625	19	61.8	− 2.6	92	13	35	28	37	1.20	− 1.45	0.63	0.0	9	11	13	6	e.	Jos. W. Morris.
Grass Lake	Jackson	989	3	60.9	.....	92	13	33	26	40	1.39	.....	0.75	0.0	5	17	2	11	sw.	Menzo Conklin.
Grayling	Crawford	1,147	20	57.6	− 0.5	83	15†	31	27	41	3.00	+ 0.07	1.00	0.0	6	6	19	5	nw.	Dr. Oscar Palmer.
Harbor Beach	Huron	635	21	58.9	− 2.3	94	14	24	28	37	1.85	− 0.42	0.86	0.0	5	20	5	5	ne.	Agent, P. M. R. R.
Harrison	Clare	1,159	16	59.4	+ 0.4	91	13	33	2†	41	1.79	− 1.34	1.11	0.0	3	9	11	10	sw.	Do.
Harrisville	Alcona	616	25	57.3	− 2.1	80	14	36	2†	42	2.20	− 0.75	0.65	0.0	12	12	7	11	sw.	Dr. D. W. Mitchell.
Hart[a]	Oceana	698	17	59.4	− 0.7	85	20	29	2	42	1.76	− 1.07	0.91	0.0	7	13	15	1	sw.	Agent, P. M. R. R
Hayes	Huron	620	10	61.4	− 0.2	93	13†	36	19†	42	1.31	− 1.25	0.76	0.0	3	12	8	10	nw.	C. F. Leipprandt.
Highland	Oakland	820	18	.....	.....	.....	.....	.....	.....	.....	0.83	− 1.98	0.55	0.0	3	.....	.....	.....	.....	A. D. De Garmo.
Hillsdale	Hillsdale	1,150	12	59.8	− 3.3	88	13	35	28	35	1.75	− 1.21	0.59	0.0	8	16	4	10	w.	Prof. C. L. Herron.

TABLE 1.—*Climatological data for September, 1909. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Michigan—Cont'd.																				
Holland	Ottawa	610	3	60.3	.....	90	14	33	27	36	1.79	.....	1.03	0.0	8	16	12	2	nw.	City of Holland.
Houghton	Houghton	668	8	56.0	− 0.1	84	13	34	27	33	2.15	− 1.39	0.73	0.0	10	12	10	8	w.	U. S. Weather Bureau.
Howell	Livingston	924	17	59.6	− 3.2	90	13	35	27†	34	0.75	− 1.46	0.60	0.0	2	14°	5°	8°	se.	Frank Sharp.
Humboldt	Marquette	1,536	12	50.8	− 2.3	80	16	17	27	62	.....	.....	.....	0.0	...	15	4	11	w.	Agent, D. S. S. A. Ry.
Iron Mountain	Dickinson	1,111	8	58.2	.....	83	13	29	26	37	0.54	− 2.97	0.30	0.0	2	7	12	11	nw.	Chapin Min. Co.
Iron River	Iron	1,504	12	54.0	− 0.5	86	19	21	25†	43	2.04	− 2.12	0.90	0.0	6	24	3	3	w.	Victor D. Laing.
Ironwood	Gogebic	1,520	6	56.4	.....	78	20	32	1	33	2.12	− 1.82	0.79	0.0	7	19	6	5	s.	Prof. J. V. Brennan.
Ishpeming	Marquette	1,536	6	54.2°	− 0.7	79°	13	24°	27	40°	1.30	− 2.96	0.60	0.0	6	11	14	5	n.	Clo'd Cliffs Iron Co.
Isle Royale	Keweenaw	610	2	54.0	.....	65	8†	44	24†	14	2.76	.....	0.92	0.0	7	3	4	23	n.	John H. Malone.
Ivan	Kalkaska	.....	20	57.1	− 2.2	90	14	33	2†	39	3.48	+ 6.33	0.90	0.0	11	9	16	5	nw.	O. L. Giddings.
Jackson	Jackson	927	12	62.4	− 2.3	91	13	38	26	39	1.41	− 1.40	0.70	0.0	8	11	8	11	nw.	Agent, M. C. R. R.
Jeddo	St. Clair	667	20	60.5	− 1.6	91	13	33	28	38	1.94	− 0.73	0.75	0.0	7	12	8	10	nw.	William Bice.
Kalamazoo	Kalamazoo	955	33	60.6	− 2.5	87	13	36	27	28	2.62	− 0.48	0.79	0.0	7	16	7	7	sw.	Kalamazoo Asylum.
Lansing	Ingham	881	22	60.6	− 1.3	91	13	37	2	37	2.29	− 0.45	1.25	0.0	8	11	10	9	sw.	State Board of Health.
Lapeer	Lapeer	827	10	60.0	− 1.9	92	12	33	28	36	0.92	− 2.50	0.43	0.0	5	22	6	2	sw.	Michigan Home.
Ludington[a]	Mason	586	11	59.8	− 1.8	80	21	40	7	29	3.16	+ 1.29	1.10	0.0	5	9	17	0	sw.	Agent, P. M. R. R.
Mackinac Island	Mackinac	831	9	56.6	− 2.2	81	21	37	28	31	.....	.....	.....	0.0	...	17	8	5	n.	M. I. S. P. Com.
Mackinaw	Cheboygan	592	13	57.6	− 0.9	85	21	35	28	30	1.95	− 2.66	0.90	0.0	4	6	20	4	w.	Agent, G. R. & I. Ry.
Mancelona	Antrim	1,121	13	55.0	− 3.1	88	14	27	27	41	2.16	− 1.19	1.05	0.0	7	21	7	2	w.	Do.
Manistee	Manistee	600	12	59.6	− 0.5	86	20	33	26	32	.....	.....	.....	0.0	...	17	11	2	sw.	Agent, P. M. R. R.
Maple Ridge	Delta	.....	3	53.0	.....	82	13	26	26	38	2.60	.....	1.11	0.0	7	18	2	10	n.	Herman Johnson.
Marquette	Marquette	734	38	55.8	− 1.0	83	13	35	27	31	1.69	− 1.82	1.25	0.0	9	8	11	11	nw.	U. S. Weather Bureau.
Menominee	Menominee	581	10	57.0	− 2.6	79	14	31	27	31	1.48	− 2.18	0.53	0.0	6	17	6	7	ne.	Fire Department.
Midland	Midland	604	10	62.3	+ 0.9	94	13	35	2	45	5.03	+ 2.79	2.50	0.0	5	7	11	12	sw.	Agent, P. M. R. R.
Montague[a]	Muskegon	660	6	58.9	.....	84	13†	32	2	37	1.10	− 2.53	0.47	0.0	4	12	9	8	se.	G. A. Whitbeck.
Morencie	Lenawee	811	2	61.2	.....	91	13	34	28	38	1.11	.....	0.82	0.0	5	15	5	10	nw.	George J. Tripp.
Mount Clemens	Macomb	615	9	60.6	− 1.9	90	13	31	28	38	0.73	− 2.33	0.60	0.0	3	5	8	17	se.	Herman H. Orbits.
Mount Pleasant	Isabella	826	10	60.2	− 0.9	90	18†	32	27†	41	0.59	− 2.13	0.47	0.0	2	14	11	5	sw.	Agent, P. M. R. R.
Muskegon	Muskegon	587	13	58.7	− 3.3	84	20	33	2	37	2.06	− 1.81	0.76	0.0	4	24	4	2	w.	Agent, G. R. & I. Ry.
Newberry	Luce	773	8	51.6	.....	79	16†	25	26†	42	3.32°	+ 0.98	1.00	0.0	6°	11	2	17	w.	Agent, D. S. S. & A. Ry.
Old Mission[a]	Grand Traverse	848	15	59.7	− 1.3	87	13	39	27	38	2.47	− 0.67	1.22	0.0	7	8	17	4	n.	E. O. Ladd.
Olivet	Eaton	934	18	58.0	− 3.5	83	13	36	26	32	2.80	− 0.57	1.59	0.0	8	22	1	7	ne.	Prof. G. A. Knapp.
Omer	Arenac	616	10	57.6	− 2.0	94	13	31	8†	55	.....	.....	.....	0.0	...	4	18	8	ne.	Agent, D. & M. Ry.
Onaway	Presque Isle	826	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Ovid	Clinton	760	19	60.2	− 1.2	94	13	32	2	45	2.00	− 0.58	1.02	0.0	7	12	8	10	s.	George B. Faxon.
Owosso	Shiawassee	731	12	60.8	− 2.4	92	13	33	2	42	1.88	− 0.91	1.08	0.0	6	5	21	4	sw.	Owosso Sugar Co.
Petoskey	Emmet	660	19	58.4	− 1.3	89	14	34	27	36	2.58	− 0.08	1.04	0.0	10	11	10	9	w.	Agent, G. R. & I. Ry.
Plymouth	Wayne	725	12	60.0	− 2.1	93	13†	30	2	48	0.86	− 1.70	0.35	0.0	4	16	8	6	w.	Agent, P. M. R. R.
Pontiac	Oakland	935	9	60.8	− 1.4	89	14	38	28	33	1.13	− 1.39	0.40	0.0	6	14	6	10	sw.	Fred W. Shaw.
Port Austin[a]	Huron	618	13	59.6	− 1.4	92	13	33	17†	43	.....	.....	.....	0.0	...	2	20	8	sw.	Agent, P. M. R. R.
Port Huron	St. Clair	639	34	59.8	− 1.1	88	14	35	28	35	1.90	− 0.78	0.93	0.0	10	9	5	16	sw.	U. S. Weather Bureau.
Powers	Menominee	868	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent, C. & N. W. Ry.
Reed City	Oceola	1,033	13	57.1	− 2.8	87	10	30	25†	41	0.90	− 2.32	0.20	0.0	7	25	2	3	w.	Agent, P. M. R. R.
Roscommon[a]	Roscommon	1,141	5	55.6	.....	88	14	26	2	48	1.62	− 1.39	1.04	0.0	5	7	17	5	nw.	Agent, M. C. R. R.
Saginaw	Saginaw	601	7	61.7	.....	93	13	37	28	36	2.70	− 1.36	1.30	0.0	8	6	22	2	ne.	Postmaster.
Saginaw, W. S.	....do	601	14	60.6	− 1.8	94	13	35	28	40	2.53	− 0.97	1.61	0.0	8	13	10	7	nw.	R. B. Hudson.
St. Ignace	Mackinac	593	19	.....	.....	.....	.....	.....	.....	.....	0.72	− 2.23	0.31	0.0	4	16	0	14	w.	Agent, D. S. S. & A. Ry.
St. James	Charlevoix	681	3	59.1	.....	80	13†	40	30	23	3.24	.....	0.92	0.0	8	11	10	9	sw	Rev. N. Wilhelm.
St. Johns	Clinton	779	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	City of St. Johns.
St. Joseph	Berrien	593	23	62.7[b]	− 1.1	88[b]	14	40[b]	26	26[b]	2.05	− 1.12	0.75	0.0	7	11	8	11	sw.	City of St. Joseph.
Sandusky[f]	Sanilac	790	.....	60.2	.....	93	14	29	26	50	1.03	.....	0.50	0.0	3	20	0	4	nw.	Agent, P. M. R. R.
Saranac	Ionia	639	14	59.8	− 1.9	92	13	33	2	41	2.69	− 1.11	1.05	0.0	6	12	6	12	nw.	John Wallington.
Sault Ste. Marie	Chippewa	614	21	53.8	− 0.5	80	21	35	28	31	1.92	− 1.54	1.11	0.0	11	6	12	12	nw.	U. S. Weather Bureau.
South Haven	Van Buren	585	13	56.4	− 6.0	81	20	34	27	36	2.75	− 0.48	0.70	0.0	7	19	9	2	se.	Mrs. M. E. De Diemar.
Stanton	Montcalm	880	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	City of Stanton.
Thomaston	Gogebic	1,347	12	52.8	− 3.2	78	13†	24	3†	45	4.77	+ 1.32	2.00	0.0	6	10	14	6	w.	Agent, D. S. S. & A. Ry.
Thornville	Lapeer	975	32	58.9	− 4.0	88	14	32	28	36	2.06	− 1.03	0.62	0.0	5	8	11	11	nw.	Dr. J. S. Caulkins.
Traverse City	Grand Traverse	588	12	63.0	+ 1.9	87	13	40	16†	42	0.65	− 2.51	0.20	0.0	3	0	9	21	n.	Agent, G. R. & I. Ry.
Vassar	Tuscola	641	9	63.2	+ 0.7	92	13†	23	28†	47	.....	.....	.....	0.0	...	.....	.....	.....	sw.	Agent, P. M. R. R.
Victoria	Ontonagon	.....	.....	56.7	.....	82	13	34	26†	34	2.55	.....	0.88	0.0	9	13	9	8	nw.	R. S. Schultz, Jr.
Watersmeet	Gogebic	1,605	.....	54.2	.....	80	13	22	25†	42	2.50	.....	1.65	0.0	12	11	6	13	.....	B. H. Grant.
Wasepi	St. Joseph	842	12	60.6	− 2.4	87	13	36	26	32	3.35	+ 0.35	1.20	0.0	7	22	1	7	sw.	Charles A. Palmer.
Webbersville	Ingham	884	7	66.1	.....	91	13	34	2†	40	1.13	− 3.64	0.55	0.0	5	5	13	12	se.	J. R. Wadsworth.
West Branch[a]	Ogemaw	973	7	61.0	.....	90	14	39	30	36	2.19	+ 0.02	1.50	0.0	4	11	8	4	nw.	Agent, M. C. R. R.
Wetmore	Alger	878	12	54.6	− 0.2	80	21	26	26	37	.....	.....	.....	0.0	...	16	0	14	n.	Agent, D. S. S. & A. Ry.
Whitefish	Chippewa	610	19	54.6	− 1.3	73	21	35	28	25	1.77	− 2.55	0.62	0.0	11	15	1	14	nw.	Robert Carlson.
Woodlawn	Montmorency	.....	7	54.6	.....	88	13†	26	27	43	2.30	− 1.04	1.06	0.0	10	11	11	8	sw.	T. C. Mathews.
Ypsilanti	Washtenaw	736	24	60.8	− 1.0	91	13	35	28	39	1.61	− 1.46	0.85	0.0	9	0	27	3	se.	Orin J. Bemiss.
Ohio.																				
Akron[b]	Summit	1,081	23	62.9	− 1.2	88	13†	37	29	34	2.20	− 1.01	1.47	0.0	10	18	4	8	sw.	Prof. C. R. Olin.
Benton Ridge	Hancock	800	17	62.7	− 3.0	90	13	34	28	38	1.82	− 0.51	1.25	0.0	4	13	10	7	ne.	J. W. Powell.
Bowling Green	Wood	670	17	62.0	− 3.1	92	13	33	28	40	1.61	− 1.30	1.35	0.0	3	13	9	8	nw.	C. G. Housekeeper.
Bucyrus	Crawford	1,000	11	60.8	− 5.0	88	13	29	28	39	1.64	− 1.11	0.65	0.0	7	19	0	11	se.	J. R. Hopley.
Cleveland (1)	Cuyhoga	762	39	62.1	− 2.2	86	14	42	28	26	3.40	+ 0.18	1.37	0.0	10	11	9	10	se.	U. S. Weather Bureau.
Cleveland (2)	....do	754	13	62.2	− 2.5	88	14	41	28	27	3.80	+ 0.86	1.53	0.0	8	10	5	15	sw.	F. Odenbach, S. J.
Defiance	Defiance	712	16	61.0	− 4.2	91	13	32	28	39	2.14	− 0.83	1.82	0.0	7	18	2	10	se.	J. F. Heilshorn.
Findlay	Hancock	776	20	62.2	− 4.0	93	13	33	28	41	1.82	− 1.02	1.04	0.0	8	22	4	4	sw.	Dr. E. A. Moser.
Fremont	Sandusky	.....	9	62.8	.....	91	13	36	28	32	0.88	.....	0.72	0.0	3	17	6	7	sw.	E. S. Thomas.
Hedges	Paulding	725	12	61.1	− 4.3	93	13	33	28	42	3.48	+ 1.22	2.90	0.0	5	18	7	5	ne.	Charles Stutzman.
Hillhouse	Lake	1,000	18	60.8	− 2.3	87	14†	31	28	35	2.51	− 1.35	0.74	0.0	10	18	5	7	nw.	J. W. Doncaster.
Hiram	Portage	1,260	25	61.4	− 1.3	87	14	36	25	31	1.41	− 1.94	0.41	0.0	7	14	7	9	sw.	George H. Colton.
Hudson	Summit	1,153	15	60.6	− 3.3	90	14	32	28	42	2.19	− 0.82	1.18	0.0	7	22	3	5	sw.	W. I. Chamberlain.
Lima	Allen	875	9	61.8	.....	89	13	32	28	34	1.90	.....	1.15	0.0	4	21	4	5	sw.	Miss Ollie De Long.
Medina	Medina	944	15	62.2	− 2.9	90	14	31	28	42	2.33	− 0.73	1.11	0.0	6	19	4	7	nw.	F. W. Clark.
Montpelier	Williams	.....	18	61.8	− 1.8	91	13	32	28	38	1.83	− 1.62	1.15	0.0	6	20	4	6	w.	G. L. Laser.
Napoleon	Henry	680	17	62.6	− 2.2	91	13	35	28	35	2.25	− 0.71	1.83	0.0	10	17	6	7	w.	A. C. Senter.
New Bremen	Auglaize	1,038	16	63.6	− 3.1	90	14†	33	28	40	1.99	− 0.55	0.70	0.0	7	15	10	5	ne.	Lillian Grothaus.
North Royalton	Cuyahoga	1,000	17	61.2	− 3.9	89	14	35	28	34	2.36	− 1.17	1.22	0.0	9	17	8	5	w.	W. S. Edgerton.
Norwalk	Huron	719	16	61.7	− 3.4	93	13†	33	28	42	1.42	− 1.13	0.45	0.0	8	21	3	6	s.	A. Sheldon.
Oberlin	Lorain	855	27	62.4	− 1.6	90	14	34	28	42	4.21	+ 1.66	2.25	0.0	12	16	4	10	n.	Prof. F. F. Jewett.
Ottawa	Putnam	720	15	61.6	− 4.3	90	13†	33	28	39	2.32	− 0.18	1.48	0.0	5	0	20	10	w.	John T. Maidlow.
Rocky Ridge	Ottawa	590	16	63.4	− 3.1	95	13	38	28	35	1.08	− 1.87	0.95	0.0	4	9	10	11	sw.	Anson Green.
Rome	Ashtabula	.....	7	60.0	.....	90	13†	29	28	42	3.37	.....	1.53	0.0	10	19	2	9	nw.	G. H. Crosby.
Sandusky	Erie	629	33	63.4	− 1.9	86	14	41	28	27	1.03	− 1.65	0.57	0.0	9	11	11	8	w.	U. S. Weather Bureau.
Tiffin	Seneca	775	24	62.5	− 2.2	87	13†	37	28	34	1.53	− 1.02	0.57	0.0	8	14	9	7	n.	T. H. Sonnedecker.
Toledo (1)	Lucas	628	39	62.2	− 1.9	90	13	41	28	26	2.61	+ 0.25	1.63	0.0	7	17	9	4	sw.	U. S. Weather Bureau.
Toledo (2)	....do	606	6	62.0	.....	90	13	40	28	28	2.24	.....	1.35	0.0	8	16	7	7	n.	J. A. Krance.

TABLE 1.—*Climatological data for September, 1909. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Cont'd.																				
Upper Sandusky	Wyandot	854	27	63.0	− 2.6	89	13	35	28	38	2.08	− 0.52	0.80	0.0	6	17	3	10	sw.	R. S. Kiefer.
Vickery	Sandusky	588	17	62.6	− 2.8	94	14	34	28	38	0.95	− 1.59	0.48	0.0	7	11	14	5	s.	John W. Barr.
Wauseon	Fulton	780	40	61.1	− 2.3	92	13	34	28	39	1.71	− 0.97	1.29	0.0	11	14	7	9	nw.	Thomas Mikesell.
Wellington	Lorain	856	17	62.3	− 3.9	91	13	36	28	36	2.84	+ 0.24	1.06	0.0	11	20	1	9	nw.	W. D. Warren.
Willoughby	Lake	.....	...	.....	.....	.....	.....	.....	.....	.....	2.30	− 0.68	0.48	0.0	10	3	16	11	n.	C. J. Richardson.
Pennsylvania.																				
Erie	Erie	713	36	62.4	− 1.5	83	14	46	6	24	3.70	+ 0.21	1.58	0.0	9	10	10	10	s.	U. S. Weather Bureau.
New York.																				
Adams Center	Jefferson	540	18	60.8	.....	86	14	42	6†	34	4.38	+ 0.91	1.10	0.0	9	9	16	5	n.	A. E. Cooley.
Angelica	Allegany	1,340	26	57.4	− 1.4	88	14	27	6†	44	1.92	− 1.05	0.73	0.0	7	1	23	6	nw.	Charles P. Arnold.
Appleton	Niagara	270	18	60.6	− 0.9	91	15	40	28	33	2.61	− 0.29	1.25	0.0	8	13	10	7	n.	H. A. Van Wagoner.
Auburn	Cayuga	715	40	61.0	0.00	93	14	39	19†	36	2.85	− 0.20	1.30	0.0	7	24	3	3	n.	A. H. Underwood.
Avon	Livingston	585	14	60.4	− 1.2	91	14	32	21	48	1.89	− 0.77	0.78	0.0	6	15	9	6	.....	W. G. Markham.
Benson Mines	St. Lawrence	.....	1	56.1[a]	.....	91[a]	14	27[a]	25†	55[a]	3.02	.....	0.81	0.0	9	11	16	3	nw.	R. C. Folger.
Blue Mountain Lake	Hamilton	1,750	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. F. Merwin.
Brockport	Monroe	537	13	61.3	− 2.1	89	15	39	19	38	1.66	− 0.94	0.84	0.0	8	12	10	8	w.	W. H. Lennon.
Buffalo	Erie	767	58	61.7	− 1.2	86	14	44	28	34	2.61	− 0.57	0.99	0.0	11	9	11	10	s.	U. S. Weather Bureau.
Canton	St. Lawrence	448	15	57.3	− 2.0	86	14	36	19	33	3.25	+ 0.44	0.66	0.0	12	7	14	9	sw.	Do.
Cape Vincent	Jefferson	246	4	59.3	.....	84	14	39	18	31	2.62	.....	1.09	0.0	6	12	15	3	sw.	V. M. Rice.
Carvers Falls	Washington	243	11	57.7	− 2.5	82	14	33	19	37	2.98	− 0.65	1.60	0.0	6	17	6	7	s.	W. Fancher.
Chazy	Clinton	151	13	59.0	+ 0.6	83	14	33	19	46	2.42	.....	1.25	0.0	7	18	7	5	s.	W. R. North.
Dannemora	...do	1,490	4	58.0	.....	82	23	36	29	32	2.99	.....	1.25	0.0	8	12	9	9	w.	W. N. Thayer.
Elba	Genesee	500	10	59.0	− 3.7	88	14	35	28	40	1.63	− 0.93	0.50	0.0	5	23	0	7	sw.	Jos. S. Wilfert.
Faust	Franklin	1,552	9	55.6[b]	.....	82[b]	14	31[b]	29	34[b]	3.29	+ 0.04	0.88	0.0	8	17	5	8	w.	Aaron W. Maddox.
Fayetteville	Onondaga	530	8	61.0	.....	93	14	39	19	38	1.95	− 0.50	0.61	0.0	9	17	5	8	w.	D. H. Wells.
Gabriels	Franklin	1,729	7	54.6	.....	85	14	22	19	55	3.40	.....	0.85	0.0	7	12	15	3	w.	W. S. Everham.
Harkness	Clinton	622	6	58.2	.....	83	14†	36	19	35	2.79	.....	1.52	0.0	10	22	5	3	s.	J. W. Harkness.
Hemlock Lake	Livingston	900	11	60.4	− 2.7	87	14	35	19	36	1.66	− 0.60	0.69	0.0	4	12	14	4	s.	D. H. Westbury.
Hunt	...do	1,321	10	62.2	− 0.4	94	14	34	19	42	3.08	+ 0.62	1.22	0.0	8	9	17	4	sw.	W. S. Barrager.
Ithaca	Tompkins	928	31	60.2	− 0.4	91	14	38	8	42	2.90	+ 0.07	1.04	0.0	9	7	13	10	se.	U. S. Weather Bureau.
Keene Valley	Essex	1,000	11	57.6	− 0.2	87	14	29	19†	47	3.01	− 0.45	2.10	0.0	10	11	12	7	s.	E. R. Wells.
Keuka Park	Yates	750	63	61.8	.....	91	14	37	29	39	2.21	− 0.28	0.56	0.0	15	14	10	6	sw.	Dean L. Myers.
King Ferry	Cayuga	.....	9	.....	.....	.....	.....	.....	.....	.....	3.07	+ 0.63	1.20	0.0	8	18	7	5	nw.	L. A. Goodyear.
Lake George	Warren	350	4	59.0	− 1.6	84	3	34	29	46	3.16	− 0.46	1.48	0.0	9	10	12	8	s.	Charles Forsell.
Lake Placid Club	Essex	1,864	1	52.4	.....	85	14	29	19	39	1.92	.....	0.68	0.0	9	15	12	3	w.	Henry Van Hoevenberg.
Le Roy	Genesee	920	19	61.4	+ 1.1	92	14	38	28	40	2.61	− 0.39	0.80	0.0	11	13	7	10	nw.	F. W. Ball.
Lockport	Niagara	650	22	61.0	− 1.3	89	14	42	19	34	2.76	− 0.05	1.32	0.0	9	17	5	8	sw.	J. E. Wakeman.
Lowville	Lewis	900	42	56.4	− 1.2	88	14	28	29	41	2.02	− 1.05	0.58	0.0	6	19	6	5	w.	Charles J. Rice.
Lyndonville	Orleans	.....	9	.....	.....	.....	.....	.....	.....	.....	1.52	− 0.92	0.47	0.0	4	25	3	2	sw.	Milton St. John.
Moira	Franklin	200	9	59.0	.....	87	23	34	19	34	3.78	.....	0.74	0.0	10	11	11	8	w.	C. E. McBride.
Nehasane	Hamilton	1,750	1	54.2	.....	83	14	26	19	40	2.69	.....	0.56	0.0	9	19	5	6	w.	A. C. Heyburn.
North Hammond	St. Lawrence	300	20	58.6[b]	− 4.1	86[b]	15	36[b]	19	36[b]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Lake	Herkimer	1,822	8	55.6	− 1.1	85	14	33	29	35	3.16	− 0.68	0.72	0.0	6	15	6	9	nw.	H. A. Paulls.
Ogdensburg	St. Lawrence	175	17	60.4	− 0.9	85	15†	40	19†	32	4.72	+ 1.97	1.65	0.0	10	12	14	4	sw.	State Hospital.
Old Forge	Herkimer	1,733	1	55.2	.....	87	14	29	29	39	3.12	.....	0.76	0.0	10	11	10	9	.....	Stuart W. Nelson.
Oswego	Oswego	335	39	60.2	− 2.5	85	14	42	29	29	2.56	− 0.25	1.02	0.0	8	11	6	13	s.	U. S. Weather Bureau.
Otto	Cattaraugus	1,410	5	62.9	.....	96	15	40	2†	37	2.58	.....	0.90	0.0	9	18	6	6	.....	.....
Palermo	Oswego	460	50	.....	.....	.....	.....	.....	.....	.....	1.77	− 1.30	0.70	0.0	6	20	5	5	nw.	E. B. Bartlett.
Perry City	Schuyler	1,038	19	59.8	+ 0.3	90	14	33	29	40	3.11	+ 0.37	1.10	0.0	8	9	13	8	n.	W. H. Jeffers.
Philadelphia	Jefferson	485	3	60.0	.....	87	23	37	25†	36	2.51	.....	0.65	0.0	8	6	21	3	s.	E. D. Babcock.
Plattsburg	Clinton	170	50	60.0	+ 0.6	80	8	35	19	34	3.22	+ 0.16	1.27	0.0	9	8	14	8	sw.	T. P. Davison.
Potsdam	St. Lawrence	300	33	58.8	+ 1.0	88	14	36	20†	35	3.02	− 0.06	0.77	0.0	16	16	6	8	sw.	Lloyd W. Weed.
Raquette Lake	Hamilton	.....	1	55.6	.....	80	14	35	26	32	3.57	.....	0.99	0.0	10	13	10	7	sw.	R. J. Dunning.
Rochester	Monroe	523	80	61.2	− 0.7	91	14	40	28	37	1.86	− 0.46	0.78	0.0	11	7	9	14	s.	U. S. Weather Bureau.
Romulus	Seneca	719	17	62.2	− 0.4	90	14	39	19	39	1.61	− 0.95	0.75	0.0	4	12	11	7	nw.	.....
Scottsville	Monroe	.....	...	.....	.....	.....	.....	.....	.....	.....	3.44	+ 0.74	1.87	0.0	8	.....	.....	.....	.....	F. Budlong.
Shortsville	Ontario	740	10	61.5	− 1.9	89	14	39	19	35	2.06	− 0.10	1.09	0.0	8	15	11	4	nw.	C. H. Latting.
Skaneateles	Onondaga	.....	9	.....	.....	.....	.....	.....	.....	.....	2.48	− 0.60	0.60	0.0	9	.....	.....	.....	.....	Edward Conson.
Syracuse	...do	597	7	60.7	− 0.9	87	14	43	28	30	1.68	− 1.14	0.56	0.0	9	11	11	8	s.	U. S. Weather Bureau.
Ticonderoga	Essex	344	11	58.6	− 3.6	80	3†	34	23	46	2.35	− 0.64	2.00	0.0	3	16	3	11	s.	Eva M. De Lano.
Trudeau	...do	1,620	16	53.4	− 3.3	79	6†	27	19	43	2.32	− 1.20	0.57	0.0	10	17	8	5	w.	.....
Volusia	Chautauqua	1,167	10	60.2	− 1.7	84	14	40	6†	30	5.91	+ 2.00	1.85	0.0	8	8	17	5	n.	Benjamin Breads.
Watertown	Jefferson	737	16	59.7	− 1.6	85	14	40	2†	32	3.11	− 0.75	1.22	0.0	9	15	11	4	nw.	H. P. Dunlap.
Wedgwood	Schuyler	1,430	20	60.5	− 1.1	89	14	38	28	37	3.43	+ 0.68	0.96	0.0	11	19	7	4	n.	O. F. Corwin.
Westfield	Chautauqua	837	13	60.6[a]	− 2.4	83[a]	14	41[a]	28	33[a]	5.70	+ 2.50	2.37	0.0	11	.....	.....	.....	.....	John R. Rogers.
Youngstown	Niagara	.....	7	.....	.....	.....	.....	.....	.....	.....	1.45	.....	0.76	0.0	4	6	21	3	n.	B. V. Brookins.
Vermont.																				
Burlington	Chittenden	404	3	58.1	− 0.8	81	14	36	19	35	4.36	+ 1.01	1.52	0.0	12	6	11	13	s.	U. S. Weather Bureau.
Cornwall	Addison	507	17	59.6	− 1.3	89	14†	36	18	43	3.24	+ 0.29	1.91	0.0	8	14	9	7	s.	C. H. Lane.
Enosburg Falls	Franklin	601	19	58.6	+ 0.6	86	14	31	8	44	4.73	+ 1.51	1.60	0.0	15	11	9	10	s.	L. H. Pomeroy.
Northfield	Washington	876	24	54.7	+ 0.1	80	14	29	19	42	3.65	+ 0.29	1.45	0.0	14	8	11	11	s.	U. S. Weather Bureau
Wells	Rutland	750	18	58.0	− 0.8	78	14	36	19	25	4.08	+ 0.14	1.85	0.0	9	11	13	6	s.	E. R. Pember.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 4, Lake Region.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Minnesota.																																	
Duluth	Lake				T.						T.	T.		.25	.01	.03	.02			.20	1.24	1.50	.03	T.								3.28
Floodwood	do																																
Mt. Iron	do											T.	.03	.28		.20	.04			.24	.12	2.90	.19										4.00
Stephen's Mine	do				.08									.83		.12	.07			.11	.49	1.03	.38										3.11
Two Harbors	do													1.50	T.	.15	.50			.50	2.90	1.10											6.65
Wisconsin.																																	
Appleton	Fox			.18	T.				.01	.13		.02	.27	.25	.50	T.						T.	.63		.02				.08	T.			2.09
Ashland	Lake				T.					T.				T.	.59	.02	.06				.04	1.38	.84										2.93
Cecil	Fox			T.	T.				.06				.24	.63	.60								.28							T.			1.81
Chilton	Lake			.34	.04					.20	T.	.04	.16	.35	.10	.04						.04	.70		.08				.11	T.			2.20
Crandon	Fox			T.	T.					.13			.20	.16	2.10	.25	T.				T.		.04										2.88
Florence	Menominee					.07				.09			.30			1.53							.22							.11			2.32
Fond du Lac	Fox			.18					.03	.08		.65	.18	.04	.23	.02						.04	.69						.15				2.29
Grand River Locks	do			.66					T.	.10	T.		.17	.24	1.20							T.	.32		.10								2.49
Green Bay	Lake			.35	T.				.29				.13	.87	.22							.45	.35	T.					T.	.02			2.68
Herbster	do																																
Iron River	do									T.				T.	.58	.05	.04			.12	.10	1.00	.50	T.									2.39
Kewaunee	do			.40					.20	T.			.10	.08	.25	.20							.90						T.	.10	.10		2.33
Manitowoc	do				.28				.61		.01		.50		.51							1.10	.02	.02					.01	.06			3.12
Menasha	Fox			.17					.33			1.22	.32	.06									.28	.08					.04				2.50
Menominee Falls	Lake		T.	.32	T.				.03	.44			.10		.63	.05						.12	1.04						.04	T.			2.77
Milwaukee	do		.17	.16	.03				.01	.32	T.	T.	.10		1.00							1.30	.26						.04	T.			3.39
New London	Fox			.30	T.					.30	.85		.30	.80	.67								.45	.10					.10				3.87
Oconto	Lake			.30					.14				.27		.70	.03							.62						T.	.02			2.08
Oshkosh	Fox			.21	T.				.07			T.	*	.55	.18							*	.65		.07				.18				1.91
Pine River	do		T.	.13					.06	.01		T.		.29	.80	1.65	T.					T.	.33	.03	.15				.02				3.47
Plum Island	Lake			.19	.02					.02			.03	T.	.35	.30	.06						.82		.03					.02			1.84
Port Washington‖	do			.90						.30			.13	.25	.72							.10	1.12						.05				3.57
Racine	do			.48		.05			T.	.65			.05	.10	T.	.37					T.	.02	1.63	.12					.01				3.48
Sheboygan	do			.37	.07	.03				.27		T.	T.	.10	.20	.54						T.	1.28	.03					.06	.05			3.00
Sturgeon Bay	do			.43	.15					.07			.03	.07	.39	.01						.01	.89	T.					.04	.15			2.24
Superior‖	do													.12	T.	.04	.01			.16	T.	2.07	1.12										3.52
Waupaca	Fox			.15					.32				.60	.17	1.93							.03	.25	.04					.16				3.65
Illinois.																																	
Chicago	Lake		.22	.29	.01				.05	.06					1.10							1.05	.82						T.				3.60
Indiana.																																	
Auburn‖	Maumee			.02	.07					.02	.25												.16	2.03		.04				.03	.02			2.64
Elkhart	St. Joseph			.09	.03	.12			.32		.15					.65					T.		.62	.84	.08				.02	T.	T.			2.92
Fort Wayne	Maumee			.82	T.				T.	1.17	.01					T.					T.		.25	1.30	T.				.05	T.	T.			3.60
Hammond	Lake																					.55	.48	.32										1.35
Lima‖	St. Joseph			.18								.85				.25							.47	1.40	.06									3.21
South Bend‖	do			.25	.29	.16				.03	.04					1.08							.68	.36						.10	.01			3.00
Michigan.																																	
Adrian	Raisin			T.					T.	.28					T.						T.		.45	.41	.21				.08	T.			1.43
Agricultural College	Grand					.01										.20							.31	.79	.03					.15	.02			1.51
Allegan	Kalamazoo			.32	T.					.38				1.22									.81	.65	.10				.11	.05			3.64
Alma	Saginaw			.13	.07						T.		.04			.45						1.30	1.12							.40	.08			3.59
Alpena	Lake			.11	.11					T.		T.	.08	.02	.05	.07							.81	.18	.01	T.			.04	.16	.22			1.86
Ann Arbor	Huron			T.	.02					.02					T.	T.							.12	.56	.12				.01	.07			0.92
Arbela	Saginaw									.13														.86						.31			1.30
Ball Mountain	Clinton																																
Baraga	Lake																																
Battle Creek	Kalamazoo			.12	.05					.24						.40					T.		.51	1.15	.08				.12	.07			2.74
Bay City	Saginaw			.20												.20						2.00								.25			2.65
Benzonia	Betsey's			.46	.12																	T.	1.60	.20	.02					.55			2.95
Bergland	Ontonagon				.08							T.	.06	.77	.08	.07						.69	.07							T.			1.82
Berlin	Clinton				.05					.02					.01								T.	.45	.05		.06			.36	T.		1.00
Big Rapids	Muskegon			.18	.08					.03				.03	.01	.10							1.39	.19	.03					.24			2.28
Blaney	Manistique				.05									.55			.65				.04	.03	.05							.01			1.38
Bloomingdale	Lake			.18	T.											1.50							.59	.55	T.				.18	.02	.03		3.05
Cadillac	Manistee				.30									.04		.30							1.17	.10	.07					.30			2.28
Calumet	Lake				.02	.02	T.						.08	.09	.60	.18	.08			T.	T.	.25	.38							.29	.01		2.00
Cassopolis	St. Joseph			.10	.05					.35						.45					.28		1.20								.05		2.48
Charlevoix	Lake									.40						.15							.80	.24						.25			1.84
Charlotte	Kalamazoo			.03	T.					.04				.38									.37	.78	T.				.08	.13			1.81
Chatham	Lake												.08		1.32	.08	.14						.20							.19			2.01
Cheboygan	Cheboygan													.45		.30	.15						1.00								.35		2.25
Clinton	Raisin				.05					.30													.15	.67	.26				.07	.04			1.54
Coldwater	St. Joseph			.07						.20						.16							.37	1.06					.24				2.10
Concord	Kalamazoo			T.	T.					.45						T.					T.	1.10							.40	T.			1.95
Croton	Muskegon			.07	T.									.14		.11							1.25	.21					T.	.12			1.90
Deer Park	Lake				T.		T.			T.			.08	T.	.25	.40	.20						.18						.10	.30			1.51
Detour	St. Mary's						T.				.06		.04	.56	.06	.60	.07	.02					.94	.04						.96	.30		3.65
Detroit	Detroit			.11						.02						.02					.03		.01	.42	.09		T.		T.	.05			0.75
Durand	Saginaw			T.						T.						T.							.12	.64	T.					.21			0.97
Eagle Harbor	Lake				T.		.01						T.	.30	.50	.10	.15			.05		.10	.30							.20			1.71
East Tawas	do			.15	.20																		.30	1.00	.70		.10			.40			2.85
Eloise	Rouge															.60								.55		.30				.10			1.55
Escanaba	Lake			.18	.03		T.			.09			.02	T.	.68	T.	.05			T.		.17	.18						.03	.05			1.48
Ewen	Ontonagon																																
Flint	Saginaw				.18	.04										.04							.04	.30	.05					.20			0.85
Frankfort	Betsey's			.66										.10		.79						1.50	.10							.30	.20		3.65
Ganges	Lake			.17	.01					.55						.10							1.02	.50					.19	.10	.12		2.76
Gaylord	Cheboygan																																
Gladwin	Saginaw				1.00									T.		.20							1.00	1.25							1.10			4.55
Grand Haven	Grand		.02	.25	T.				T.	T.			.03	.07	.13	.03						.71	.78			T.			.09	.08	.01		2.20
Grand Marais	Lake																																
Grand Rapids	Grand		T.	.06	T.				T.				T.	T.	.67	.04						.57	.51	.02				.06	.18			2.11
Grape	Raisin									.28						.03					.05	.05	.04	.63	.02				.07	.03			1.20
Grass Lake	Grand				T.					.22						T.							.22	.75	T.				.10	.10	T.		1.39
Grayling	Au Sable				.15		T.						.35		.25		T.						1.00		1.00					.25	T.		3.00
Harbor Beach	Lake																							.80	.15		.50			.30	.10		1.85
Harrison	Saginaw																						1.11	.27						.41			1.79
Harrisville	Lake			.03	.17	.04				T.				.06		.03	.02						.34	.63	.15		.04			.65	.04		2.20
Hart	Pentwater			.05	.06									.11		.39							.91	.12					T.	.12			1.76
Hayes	Pigeon																							.76						.15	.40		1.31
Highland	Huron															.08								.55						.20			0.83
Hillsdale	St. Joseph			.06	.02					.48							T.						.38	.59	.06				.14	.02			1.75
Holland	Lake			.23	.02					.08						.02						T.	1.03	.23					.10	.08			1.79
Houghton	do				.03		T.						.13	.30	.39	.04	.05			.01		.28	.35						T.	.37			2.15
Howell	Saginaw															T.							.60							.15			0.75
Humboldt	Escanaba																																
Iron Mountain	Menominee									.30													.24							T.			0.54
Iron River	do				T.							T.		.80	.10								.20	.30						.30	.34		2.04

TABLE 2.—*Daily precipitation for September, 1909. District No. 4*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Michigan—Cont'd.																																	
Ironwood	Lake				.05					T.			.01	.40	.79		.07						.78			.02				.30	.10		2.12
Ishpeming	Escanaba												.05		.60	.20	T.			T.		T.	.05			T.							1.30
Isle Royale	Lake				.34										.38		.28				.12	.65	.92						.07			2.76
Ivan	Manistee			.37	.78	.02				.03				.03		.35							.90	.10	.10				.60	.20		3.48
Jackson	Grand			T.						.10						.05						.08	.20	.70	.10			.08	.10			1.41
Jeddo	St. Clair				.45											.19								.26	.07		.75	.02		.20	T.		1.94
Kalamazoo	Kalamazoo			.20						.30						.34							.77	.79					.13	.09		2.62
Lansing	Grand			T.		.05				T.	.01					.26							.44	1.25	.04				.01	.23		2.29
Lapeer	Saginaw				.40		.03		.02						.04															.43		0.92
Ludington	Pere Marquette				.40				.62													1.10	.62							.42		3.16
Mackinac Island	Lake			T.	T.					T.	T.		T.	T.	.90	.10	.15						.80	T.						T.	T.		1.95
Mackinaw	do			.10	.06											.15						1.05	.20						.45	.15		2.16
Mancelona	do																																
Manistee	Manistee									.24			.08		1.11	.12	.12						.15								.18		2.00
Maple Ridge	Lake				.02		.01			.03			.01	T.	1.25		.07			T.		T.	.14			T.			.07	.09			1.69
Marquette	do								.07	T.			.09	.10	.32							.53							T.			1.48
Menominee	Menominee			.37						T.			T.			.50					1.50		.03				2.50					5.03
Midland	Saginaw			.50											.47		T.						.13						.18			1.10
Montague	White			.32	T.											T.							.10	.82	.08				.08	T.		1.11
Morenci	Maumee			T.						.03						T.						T.		.60	.08		T.			.05		0.73
Mt. Clemens	Clinton				T.					T.						T.							.47						.12			0.59
Mt. Pleasant	Saginaw			.45										.20		.65							.76							T.		2.06
Muskegon	Muskegon										1.00		T.		.38	.38							1.00							.50	•		
Newberry	Taquemenon		.06	T.							.03					20							1.22	.23						.46			2.47
Old Mission	Lake			.20	.13											.52					T.		.56	1.03	T.				.22	.12			2.80
Olivet	Kalamazoo			.09	.08					.18																							
Omer	Lake																																
Onaway	Cheboygan				.10	.04						T.		T.		.20	T.						.37	1.02		.04					.23		2.00
Ovid	Grand				.12											12							.31	1.08	.04					.21			1.88
Owosso	Saginaw			.04	T.					.21				.10	T.	.42	.20					1.04	.15	.08					.32	.02			2.58
Petoskey	Lake				.01											.35					.30			.20	.35								0.86
Plymouth	Rouge			T.																	.05	.05	.40	.15		T.			.13	T.			1.13
Pontiac	Clinton															.35																	
Port Austin	Lake			.03	.03	.03				.01						.08							T.	.33	.10	.89	.09			.31	T.		1.90
Port Huron	St. Clair																																
Powers	Lake														.10								.10	.10						.10	.20		0.90
Reed City	Muskegon			.20	.10											.03							1.04	.16						.30	T.		1.62
Roscommon	Au Sable			T.	.09									T.		.15							.40	1.30			.20			.20			2.70
Saginaw	Saginaw			.20	.05	.20			T.					T.		.13							29	1.61			.07			.26			2.53
Saginaw, W. S.	do			.13	.02	.02				T.						.31	.21		.10											.10			0.72
St. Ignace	Lake																																3.24
St. James	do				.18						.18		.04		.92	.74	.18					.90											
St. Johns	Grand									.73	.03					.29							.15	.75							.05		2.05
St. Joseph	St. Joseph				.05																					.50		.10	.08				1.03
Sandusky	Lake				.35											.47							.88	1.05	.03					.24			2.69
Saranac	Grand			.02						.10	T.		.01	.04	.19	.12	.24						1.11	T.	.02				T.	.05	.02		1.92
Sault Ste Marie	St. Mary's				.02		T.				.70					.25						.50	.50						.30		.20		2.75
South Haven	Lake			.30																													
Stanton	Grand									T.		T.		.44	.88	.25						.65	2.00							T.			4.77
Thomaston	Lake				.55				T.	T.						.62								.45	.30			.18	T.	.51			2.06
Thornville	Saginaw									T.						T.	T.						.10			T.		.20	.10				0.65
Traverse City	Lake	.05		T.	.20																												
Vassar	Saginaw									T.			.02	.01	.88	.38	.11				T.	.66	.15		T.				T.	.20	T.		2.55
Victoria	Ontonagon				.14											.80							.55	1.20						.12			3.35
Wasepi	St. Joseph			.16	.02					.50													.11	.03						T.	.10	.03	2.50
Watersmeet	Ontonagon	T.			.02	.06				T.			.08	.03	1.65	.35	.01			.03	T.	T.	.15	.55	.10					.18			1.13
Webberville	Grand						T.								.01	.15							1.50	.50						.18			2.19
West Branch	Lake															T.																	
Wetmore	do				.03		.05				.15		.02	.01	.27	.32	.21				T.		.62							.04	.05		1.77
Whitefish Point	do																						1.06	.10	.03					.23	.08		2.30
Woodlawn	Au Sable			T.	.32					.20		.03		.20	.05								.01	.85	.05					.11	.03		1.61
Ypsilanti	Huron			T.	.20					.20						.14					.02												
Ohio.																																	
Akron	Lake				.10	.01					1.47	.01					.11						T.	.05	.24		.08	.03	T.		.10			2.20
Benton Ridge	Maumee			.40						T.	T.												T.	1.25	T.				.13	.04			1.82
Bowling Green	Lake			.05	.21					T.											T.			1.35	T.				T.	T.			1.61
Bucyrus	Sandusky				.50						.03						.08						T.	.65	.25			T.		.08	.05		1.64
Cleveland (1)	Lake			.08	.08	.02				.41	T.					.48							T.	.45	T.	.11	1.37		T.	.37	.03		3.40
Cleveland (2)	do					.15	.13			.34						.57							T.	.56		.10	1.53			.42	T.		3.80
Defiance	Maumee				.11	T.					.10					T.						.03	.01	1.82		.02			.05			2.14
Findlay	do				.30	.02				.02	.03												.03	1.04	.25					.08	.05		1.82
Fremont	Sandusky			T.						.10	T.										T.			.72					T.	.06			0.88
Hedges	Maumee			.29							.07												2.90	.08					.13				3.48
Hillhouse	Lake				.30	.06				T.	.10					.15							T.	.74		.05	.20	.51		.15	.25		2.51
Hiram	do				.18	.04				T.	.41					.06							T.	.38		T.	.06	T.	T.	.28			1.41
Hudson	do			.02	.13						1.18					.20								.42	.02					.22			2.19
Lima	Maumee			.31	.10																		.34	1.15	T.				T.	T.	T.		1.90
Medina	Lake			T.	.20						1.11					.24							T.	.55		T.	T.	.15		.08			2.33
Montpelier	Maumee			.15	T.					.16						T.						.25	1.15		.05				.07	T.			1.83
Napoleon	do			.05	.07					.07	.02		.03								T.		.04	1.83	.06				.07		.01		2.25
New Bremen	do			.33	.03					.70					.12									.70	.04				.07				1.99
North Royalton	do				T.	.04					.30					.25							1.22	.08		.18	.13			.08	.08		2.36
Norwalk	Lake				.16						.12						.15							.34	.45			.13		.01	.06		1.42
Oberlin	do			.23	.05	.03				.11	.06					.25								.76	.17	.01	.05	2.25	T.	.24			4.21
Ottawa	do			.65						T.	.02													1.48	.09					.08			2.32
Rocky Ridge	Maumee			.03	.07					.03	T.					T.							T.	.95	T.				T.	T.			1.08
Rome	Lake				.15	.02				T.	.41					.10					.30		T.	1.53			.22	.38		.05	.21		3.37
Sandusky	do			.16	.05					.05						T.					.06		T.	.57	T.		.03	.04	.01	.05			1.03
Tiffin	do			.17	.02	T.				.54	.15					T.								.57	.01		T.	T.	.04	.03			1.53
Toledo (1)	Sandusky								T.	.02						T.					1.63		.42	.47	.05				.01	.01			2.61
Toledo (2)	Lake			T.						.02	T.		.01								1.35	.01	.01	.79	.04	T.			.01	T.			2.24
Upper Sandusky	do			T.	T.					T.	.75					T.							T.	.80					.05	.02			2.08
Vickery	Sandusky			.40	.06					.06	T.					T.					.13			.48	T.				.07	T.	.06			0.95
Wauseon	Lake			.03	.12					.02	.04					.01						.02	.02	1.29	.01	.16				.08	T.			1.71
Wellington	Maumee			T.	.05	.01				.32	.27					.18					.03			.70			T.	1.06	.01	.12	.03			2.84
Willoughby	Lake			.08	.04						.17						.10								.18	.48	.05	.10	.43		.36			2.30
	do				.40	.03																											
Pennsylvania.																																	
Erie	Lake	T.		T.	.25	.14				.04	.25					T.							T.	.86		.09	1.58		.32	.17			3.70
New York.																																	
Adams Center	Ontario	1.04	T.		.34	.48	.29				.11								.04				.18	.92							.98		4.38
Angelica	Genesee					.12					.16						.73						.62	.14	T.		.04				.11		1.92
Appleton	Ontario				.02	.06					T.					.18							.66		.12	1.25	T.	T.	.15	.17			2.61
Auburn	Oswego	.15			T.	.23					.08						.27						1.30	.25			T.			.57			2.85
Avon	Genesee				.23	T.					T.						.25						.78	.12			.03			.48			1.89

TABLE 2.—*Daily precipitation for September, 1909. District No. 4*—Continued.

Stations.	River basins.	Day of month.																													Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New York—Cont'd.																																	
Benson Mines	St. Lawrence	.39			.24	.52					T.	T.		T.			.36							.28	.13			.03	.26		.81		3.02
Blue Mountain Lake	do																																
Brockport	Ontario	.03			.09	.04					.09													.84	.05	T.		T.	.20		.32		1.66
Buffalo	Erie	T.			.09	.06				.03	.08	T.		T.		.09							T.	.99	.02	.05	.43			.20	.57		2.61
Canton	St. Lawrence	.65			.37	.22		.01			.17			T.	T.	.04	.28						.06	.62				.01	.16		.66		3.25
Cape Vincent	do				.14						.04						.05							.97				.03			1.09		2.62
Carvers Falls	Champlain				T.						.15						T.							.45	.55			.17	1.60		.06		2.98
Chazy	do	.10				.10						.52					.05											.30	1.25		.10		2.42
Dannemora	do	.50	T.		T.	.21	T.	T.			T.	.18		T.	T.	*	.10							T.	.40		*	.20	1.25		.15		2.99
Elba	Ontario	T.			T.						T.						.35							.50		.03	.30			T.	.45		1.63
Faust	St. Lawrence	.67			.23	.24					.04			T.			.20								.45				.58		.88		3.29
Fayetteville	Oswego	.16	.08		.10	.21					.12						.41							.07	.54			T.			.26		1.95
Gabriels	Champlain	.72			.15	.45		T.			T.						.35	T.							.50				.85		.38		3.40
Harkness	do	.20			.08	.02					.03	.13					.12								.42			.20	1.52		.07		2.79
Hemlock Lake	Genesee				T.											.41							.69					.03		.53		1.66
Hunt	do				.03	.12					.12						.39							.72			1.22	.05			.43		3.08
Ithaca	Oswego	.02			T.	.10					1.02	.01					.50							.93	.09			.03			.18		2.90
Keene Valley	Champlain	.15	.09		.07	.05					.05	.09					T.						T.		.33			.04	2.10		.04		3.01
Keuka Park	Oswego	.01				.04					.56	.02					.23	.01		.01				.45	.39	.03	.01	.03	.02	.02	.38		2.21
King Ferry	do		.04		.03	.09					1.05						.42							1.20				.03			.21		3.07
Lake George	Champlain	.26				.08					.09	.11				T.	.08	.04							.95		T.	.07	1.48		T.		3.16
Lake Placid Club	do	.38	.03		T.	.28	T.				T.	.02				T.	.15	.04						.08				T.	.68		.24		1.92
Le Roy	Genesee	.01			.32	.06					.11					.15							T.	.65	.07		.80	.02		.01	.41		2.61
Lockport	Ontario	.08			.02						.08			T.		T.								.71	T.	.03	1.32	.13	T.	.07	.32		2.76
Lowville	do	.48			.23	.33											.15							.25							.58		2.02
Lyndonville	do				.30																			.44		.47					.31		1.52
Moira	St. Lawrence	.70			.17	.51					.39	.01		T.			.23									.47		.03	.53		.74		3.78
Nehasane	Ontario	.56			.19	.36					.07						.17								.38			.01	.55		.40		2.69
North Hammond	St. Lawrence																																
North Lake	Ontario	.56			.45		.60										.33							.72					.50				3.16
Ogdensburg	St Lawrence	.90			.55	.60		.01			.20						.12						T.	1.59	.06		.24	T.			.45		4.72
Old Forge	Ontario	.76	.05		.28	.44					.06						.23							.05	.39				.50		.36		3.12
Oswego	do	.18			.37	.09					.02			T.		T.	.01						T.	.65				.22			1.02		2.56
Otto	Erie				.06	.22				T.							.45						.09	.90	.15	T.		.30	.02		.39		2.58
Palermo	Oswego	.14			.02	.01				T.															.65			.25		T.	.70		1.77
Perry	do	.02			.07	.02					1.10						.76							.54	.28						.32		3.11
Philadelphia	St. Lawrence	.45			.23	.27					.14				.02		.13								.65						.62		2.51
Plattsburg	Champlain	.62			.20	.10	.02				.04						.20								.04			.73	1.27				3.22
Potsdam	St. Lawrence	.77	.04		.37	.35					.35			T.			.31						.03		.75		.02	.03		T.			3.02
Raquette Lake	do	.68	.06		.31	.24					.11	.06					.31								.42				.99		.39		3.51
Rochester	Genesee	.06			.19	.04				T.	.05			T.		.16	.01						T.	.78		.03	T.	T.	.04	.23	.27		1.86
Romulus	Oswego				T.						.75						.12							T.	.51						.23		1.61
Scottsville	Genesee	.04			.19	.04										.39		.20						1.87			.11				.60		3.44
Shortaville	Oswego	.21			.13	.04					T.						.08							1.09	.13			.05			.33		2.06
Skaneateles	do			.20	.32	T.					.20	.03					.23							.43	.40			.07			.60		2.48
Syracuse	do	.11			.18	.14					.13	.01				T.	.23							.53	.03		T.	T.			.32		1.68
Ticonderoga	Champlain	T.									T.														.25			.10	2.00		T.		2.35
Trudeau	do					.22			.41	.31					.14		.05								.57			.07	.06	.07	.42		2.32
Volusia	Erie				.02	.25				T.	.14					.06							T.	1.36			1.20	1.85		T.	1.03		5.91
Watertown	Ontario	.31			.14	.44					.04						.06							.60	.26			.04			1.22		3.11
Wedgwood	Oswego	.04			.04	.15					.96	.02					.96							.52	.32		.05	.05			.32		3.43
Westfield	Erie				.06	.67					T.	.13				.06								.77		.13	2.37	.39	.32	.09	.71		5.70
Youngstown	Ontario				.14												T.							.76			.51				.04		1.45
Vermont.																																	
Burlington	Champlain	.12			.02	.18		T.			.43	.01			.02		.14							1.10	.40		T.	.50	1.35		.09		4.36
Cornwall	do	.34				.15					.02					.20									.60			.28	1.63		.02		3.24
Enosburg Falls	do	.36	.03		.03	.66		.02			.09	.35			.02		.32	.09							.74			.36	1.60	.02	.04		4.73
Northfield	do	.58				.37					.11	.02			.03		.05	.01					T.	.01	.15		.07	.75	1.05	.01	.04		3.08
Wells	do	.28			T.	.16					.10	.15		T.	T.		.12							T.	1.02			.35	1.85		.05		4.05

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 4, Lake Region.*

Date.	Wisconsin.												Michigan.											
	Duluth, Minn.		Florence.		Green Bay.		Milwaukee.		Chicago, Ill.		Fort Wayne, Ind.		Alpena.		Battle Creek.		Cadillac.		Detroit.		Escanaba.		Ewen.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	64	39	64	34	70	46	71	43	72	53	70	43	76	43	74	45	71	43	73	47	71	43	69	34
2	68	46			69	45	64	49	69	54	64	42	72	46	68	38	65	37	69	42	68	39	71	34
3	71	48			71	46	71	46	72	56	69	46	69	41	69	40	68	40	70	46	69	40	73	36
4	68	46			72	46	70	46	70	56	69	46	68	41	68	40	68	40	70	46	69	40	73	36
5	69	42			69	44	69	46	69	56	69	46	68	41	68	40	68	40	69	46	69	40	73	36
6	68	46	70	41	68	46	68	46	69	56	69	46	68	41	68	40	68	40	69	46	69	40	73	36
7	74	51	74	46	74	51	74	51	74	58	74	51	74	46	74	46	74	46	74	51	74	46	74	39
8	71	53	74	49	71	53	71	53	74	58	74	53	74	49	74	49	74	49	74	53	74	49	74	43
9	72	56	74	49	72	56	72	56	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
10	68	56	74	49	68	56	68	56	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
11	56	52	70	38	70	56	72	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
12	63	52	86	50	68	56	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
13	64	55	80	52	74	56	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
14	58	54	72	50	72	56	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
15	64	55	66	42	66	56	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
16	72	56	67	41	71	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
17	68	56	69	46	69	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
18	70	56	72	46	69	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
19	68	56	72	46	69	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
20	69	53	72	46	69	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
21	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
22	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
23	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
24	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
25	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
26	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
27	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
28	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
29	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
30	73	52	77	52	72	58	74	58	74	58	74	56	74	49	74	49	74	49	74	56	74	49	74	43
Mns	63.8	46.0	66.7°	40.8°	68.9	50.8	68.3	55.0	69.8	58.3	75.1	49.9	66.1	46.3	71.1	49.8	70.1	48.0	69.5	53.3	63.6	46.5	70.2	35.8

Date.	Michigan.												New York.											
	Houghton.		Marquette.		Muskegon.		Saginaw, W. S.		Sault Ste. Marie		Cleveland.		Lima.		Sandusky.		Toledo.		Erie, Pa.		Buffalo.		Canton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	69	43	67	46	68	43	68	46	68	39	68	52	74	44	69	51	65	47	68	53	68	50	62	47
2	71	46	69	46	68	43	68	46	68	39	68	52	74	44	69	51	65	47	68	53	68	50	62	47
3	69	46	69	46	68	43	68	46	68	39	68	52	74	44	69	51	65	47	68	53	68	50	62	47
4	69	46	69	46	68	43	68	46	68	39	68	52	74	44	69	51	65	47	68	53	68	50	62	47
5	69	46	69	46	68	43	68	46	68	39	68	52	74	44	69	51	65	47	68	53	68	50	62	47
6	69	46	69	46	68	43	68	46	68	39	68	52	74	44	69	51	65	47	68	53	68	50	62	47
7	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
8	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
9	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
10	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
11	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
12	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
13	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
14	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
15	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
16	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
17	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
18	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
19	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
20	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
21	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
22	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
23	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
24	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
25	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
26	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
27	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
28	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
29	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
30	74	49	74	49	74	49	74	49	74	49	74	58	74	49	74	49	74	49	74	53	74	49	74	49
Mns	72.6	48.7	62.5	45.2	69.3	54.9	73.4	50.2	70.9	55.8	71.0	53.5	69.2	55.6	69.2	54.1	67.8	46.8	70.6	51.7	69.9	51.5	67.6	48.6

Date.	New York.												Vermont.			
	Rochester.		Syracuse.		Burlington.		Northfield.									
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.								
1	58	51	65	50	68	50	67	50								
2	69	44	68	48	65	48	64	46								
3	69	53	72	50	70	48	67	46								
4	69	56	72	50	70	48	67	46								
5	69	56	72	50	70	48	67	46								
6	69	56	72	50	70	48	67	46								
7	74	58	74	50	74	48	74	46								
8	74	58	74	50	74	48	74	46								
9	74	58	74	50	74	48	74	46								
10	74	58	74	50	74	48	74	46								
11	74	58	74	50	74	48	74	46								
12	74	58	74	50	74	48	74	46								
13	74	58	74	50	74	48	74	46								
14	74	58	74	50	74	48	74	46								
15	74	58	74	50	74	48	74	46								
16	74	58	74	50	74	48	74	46								
17	74	58	74	50	74	48	74	46								
18	74	58	74	50	74	48	74	46								
19	74	58	74	50	74	48	74	46								
20	74	58	74	50	74	48	74	46								
21	74	58	74	50	74	48	74	46								
22	74	58	74	50	74	48	74	46								
23	74	58	74	50	74	48	74	46								
24	74	58	74	50	74	48	74	46								
25	74	58	74	50	74	48	74	46								
26	74	58	74	50	74	48	74	46								
27	74	58	74	50	74	48	74	46								
28	74	58	74	50	74	48	74	46								
29	74	58	74	50	74	48	74	46								
30	74	58	74	50	74	48	74	46								
Mns	70.6	51.7	69.9	51.5	67.6	48.6	68.4	43.0								

Climatological Data for September, 1909.

DISTRICT No. 5, UPPER MISSISSIPPI VALLEY.

GEORGE M. CHAPPEL, District Editor.

TEMPERATURE.

The temperature, precipitation, and sunshine averages for September, 1909, varied only slightly from the normal though there occurred at times during the period marked deviations from ordinary conditions.

The monthly mean temperature ranged up to 3° above normal in the Dakota sections and in northern and middle Minnesota, while over the remainder of the district there was a deficiency of nearly corresponding measure. The highest temperatures of the month, ranging from about 78° to 100°, occurred generally from the 10th to the 13th, according to geographical order from northwest to southeast; other warm peroids were from the 18th to the 21st and the 27th and 28th. The lowest temperatures, ranging from 20° to 45°, were reported for the most part from the 23d to the 27th, when killing frosts and freezing temperatures were reported generally in eastern and northern North Dakota, northern and middle Minnesota, northern and middle Wisconsin, extreme northern Illinois, and in particularly susceptible localities in northern Indiana; and less severe frost occurred in Iowa, southern Minnesota, and southern Wisconsin, and quite generally over Illinois. Over the greater portion of the district these frosts were the first of the season, although late in August a few northern localities had been lightly touched, and during a cool period extending irregularly from September 1 to 5, killing frost or freezing temperatures had occurred scatteringly in northern and eastern North Dakota and northern Minnesota and in especially exposed places in northern Wisconsin; and light frost had been experienced in southern Minnesota and central and southern Wisconsin and on lowlands in the extreme northern portions of Iowa and Indiana.

PRECIPITATION.

The rainfall, as a rule, was heaviest over the immediate vicinity of the Mississippi River from Minneapolis, Minn., southward to its confluence with the Ohio River, with centers of comparatively heavy precipitation in Union County, southern Illinois, where the rainfall exceeded 9 inches, and over Wabasha County, Minnesota, along Lake Pepin, where the monthly amount was more than 7 inches. Between these centers there was a decrease to about 2 inches over middle Iowa, while northwestward from Lake Pepin there was a decrease to less than 1 inch over the North Dakota section. No snow fell during the month at any station in the district. The wettest period was generally from the 12th to the 14th or 15th, attending the eastward passage of a trough of low barometric pressure across the entire district. Rain was again general from the 21st to the 23d, during which period the heaviest rainfall of the month occurred in Illinois and Indiana as a result of a storm of tropical origin which passed northeastward over that section during the night of the 21st-22d. A tendency toward general precipitation prevailed from about the 2d to the 4th. A dry interval extended from the 16th to the 19th; and from the 24th to the close of the month practically no rain fell. No serious damage from hail or wind was reported. A slight earthquake was felt at many points in Indiana, Illinois, and eastern Iowa about 3:45 a. m. of the 27th.

In Iowa the hot and droughty conditions prevailing at the close of August were broken by lower temperatures on the 1st, and by copious and general showers on the 2d of September. From the 2d to the 14th showers occurred in some part of the State every day, and showers were general and heavy between the 12th and the 14th. Another period of showery weather prevailed between the 19th and the 24th, but the last six days were generally clear and pleasant, although the night temperatures were quite low. The rainfall of the month was very unevenly distributed, being generally heavier in the western than in the eastern portion; the totals ranged from 1.39 inches, in Marshall County, to 5.70 inches, in Calhoun County.

In northeastern Missouri the precipitation was slightly in excess of the normal, occurring generally from the 2d to the 9th; on the 14th, when copious showers were the rule; and on the 21st and 22d. No rain fell during the last eight or nine days.

In Minnesota the precipitation ranged from over 6 inches in Dakota, Goodhue, and Wabasha counties to less than 1 inch in Morrison and Kittson counties. There was an excess in the southeastern counties and in southern Itasca, St. Louis, and Lake counties of 1 to 3 inches, and a deficiency of 1 to over 2 inches in Becker, Marshall, and Kittson counties. General showers occurred over the southern portion of the State from the 3d to the 5th, and over nearly all of the State from the 12th to the 15th, and from the 19th to the 22d. From the 24th to the 30th no rain fell.

In Wisconsin the rainfall averaged slightly below normal, but it was generally well distributed both throughout the month and over the State. Most of the precipitation occurred on the 2d, 3d, 8th, 9th, 12th, 13th, 14th, 21st, and 22d. The greatest amount was 6.98 inches at Mondovi, Buffalo County, and the least amount was 1.52 inches at Lake Mills, Jefferson County.

In northern and eastern North Dakota the precipitation was fairly well distributed geographically, though generally deficient in amount. The greatest amount, 1.87 inches, occurred in Richland County, while one station in McHenry County reported none at all. Light, scattered showers occurred from the 2d to the 4th, inclusive, and heavier rainfall was fairly general from the 11th to the 14th and from the 18th to the 22d; the remaining days were practically rainless.

In Illinois the rainfall was not uniformly distributed; the heaviest falls occurred in the central and southern counties, while at many stations in the northern counties it was slightly deficient. The passage of a tropical storm on the 21st-22d caused the heaviest rainfall of the month. The greatest monthly amount, 7.17 inches, occurred at Cobden, Union County, and the least, 1.05 inches, at Zion, Carroll County.

Following are some excessive amounts of rainfall in one hour or less: At Dubuque, Iowa, on the 13th, 1.99 inches in one hour; at Springfield, Ill., on the 14th, 1.11 inches in 1 hour. The following excessive amount for twenty-four hours was reported in addition to those to be found in the climatological tables: at Cobden, Ill., 2.97 inches, on the 21st.

Temperature.—The monthly mean for the district, as shown by the records of 295 stations, was 61.0°, which is 0.9° below the normal. The highest monthly mean temperature was 71.3°, at Benton, Franklin County, Ill., and the lowest monthly mean was 53.6°, at Prentice, Price County, Wis. The highest temperature reported was 100°, at Mascoutah, St. Clair County, and Tilden, Randolph County, Ill., on the 3d; the lowest temperature reported was 20°, at Long Lake, Oneida County, Wis., on the 26th; the average monthly maximum was 87°, and the average monthly minimum was 34°; the greatest daily range of temperature was 55°, at Oriska, Barnes County, N. Dak. The average of the greatest daily ranges was 37°.

Precipitation.—The average precipitation for the district, as shown by the records of 313 stations, was 3.04 inches, which is 0.10 inch below the normal. The greatest amount, 9.17 inches, occurred at Cobden, Union County, Ill., and the least, none, at Pratt, McHenry County, N. Dak. The greatest amount in twenty-four hours, 3.52 inches, occurred at Reeds Landing, Wabasha County, Minn., on the 12th. Measurable precipitation occurred on an average of seven days.

TABLE 1.—*Climatological data for September, 1909. District No. 5, Upper Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota.																				
Amenia	Cass	954	11	60.3	+ 3.3	92	12	33	24	43	0.60	− 1.13	0.25	0.0	5	16	4	10	sw.	C. E. Wood.
Bottineau	Bottineau	1,638	13	57.7	+ 0.6	87	27	26	23	44	0.53	− 0.98	0.42	0.0	4	11	7	12	se.	J. A. Kamp.
Cando	Towner	1,488	7	58.0[h]	+ 3.1	87[h]	11	24[h]	24	47[h]	0.53	− 0.56	0.53	0.0	1	...	...	...	...	E. T. Judd.
Crosby	Williams	...	2	60.0	...	88	17	31	23	36	0.69	...	0.20	0.0	5	23	2	5	nw.	B. Lancaster.
Devils Lake	Ramsey	1,482	3	58.7	+ 3.1	87	11	31	23	33	1.15	− 0.24	1.02	0.0	5	13	13	4	se.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	9	60.6[a]	+ 5.0	90[a]	11	31[a]	23	49[a]	0.20	− 1.10	0.20	0.0	1	...	...	...	nw.	F. S. Gieselman.
Dunseith	Rolette	...	11	57.2	+ 2.2	87	11	30	20†	50	0.48	− 1.19	0.27	0.0	2	25	5	0	w.	L. H. Trowbridge.
Edmore	Ramsey	1,524	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	H. R. Aslakson.
Forman	Sargent	1,249	14	64.2	+ 6.0	93	10	34	24	47	1.14	− 0.66	0.52	0.0	3	11	17	2	nw.	A. Maltby.
Grafton	Walsh	827	11	59.9	+ 4.3	88	11†	33	24†	39	1.68	− 0.30	0.75	0.0	4	15	12	3	s.	H. Lamoure.
Granville	McHenry	1,504	2	...	...	...	...	...	...	...	0.56	...	0.29	0.0	5	...	...	...	nw.	W. A. Christiansen.
Hamilton	Pembina	824	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	D. Wallace.
Hannah	Cavalier	1,568	3	56.6[d]	...	88[d]	11	27[d]	23	50[d]	T.	...	T.	0.0	0	...	...	...	...	J. Moffatt.
Hansboro	Towner	...	1	57.8	...	88	11	30	23	44	0.60	...	0.36	0.0	2	23	3	4	nw.	Geo. Dale.
Hillsboro	Traill	901	3	60.1	...	88	11	36	5	43	1.73	...	0.48	0.0	6	19	5	6	s.	M. H. Norman.
Lakota	Nelson	1,519	2	57.6[b]	...	86[b]	11	30[b]	23	43[b]	1.31	...	0.57	0.0	6	...	...	...	se.	C. R. Pettes.
Langdon	Cavalier	1,615	13	58.6	...	91	9†	31	16	43	0.61	...	0.61	0.0	1	23	0	7	sw.	J. Woolner.
Larimore	Grand Forks	1,134	13	...	...	84[m]	3	32[b]	5	44[m]	0.20	− 1.30	0.10	0.0	2	...	...	...	...	M. Naylor.
Lisbon	Ransom	1,091	4	59.0	...	90	12	28	24	47	0.62	...	0.29	0.0	4	14	3	13	s.	H. K. Adams.
McKinney	Ward	1,640	14	58.6	+ 5.5	89	27	30	23†	50	0.16	− 1.37	0.10	0.0	2	11	17	2	nw.	M. P. Swenson.
Manfred	Wells	1,605	7	58.5	...	91	11	29	22	42	0.32	...	0.22	0.0	3	16	10	4	nw.	P. B. Anderson.
Mayville	Traill	975	13	59.0	+ 3.6	88	9†	32	23	43	0.50	− 2.12	0.25	0.0	3	17	0	13	s.	M. N. Pope.
Milnor	Sargent	...	1	...	...	82	9†	32	18	47	1.10	...	0.50	0.0	4	19	2	9	nw.	O. B. Jorgenson.
Minot	Ward	1,557	10	60.4	+ 2.8	90	27	34	23	44	0.49	− 0.71	0.30	0.0	4	20	2	8	w.	J. J. Bates.
Minto	Walsh	820	15	58.1	+ 2.0	87	9	31[a]	30	43[a]	1.37	− 0.79	0.43	0.0	6	18	9	3	se.	S. S. Marsh.
Oriska	Barnes	1,270	3	58.1[e]	...	91[e]	6	29[e]	7†	55[e]	0.55	...	0.17	0.0	6	...	...	...	se.	W. E. Williams.
Park River	Walsh	998	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	A. Heyward.
Pembina	Pembina	789	10	56.2	+ 2.5	86	9	33	24	42	1.66	− 0.67	1.50	0.0	2	20	1	9	w.	F. C. Warner.
Portal	Ward	1,054	14	60.6[e]	+ 6.4	88[e]	20	33[e]	30	46[e]	0.08	− 1.22	0.05	0.0	2	...	...	...	ne.	M. S. Davis.
Power	Richland	1,020	16	58.6	+ 0.4	89	12	32	24	45	1.87	+ 0.11	0.61	0.0	5	18	9	3	se.	J. A. Power.
Pratt	McHenry	...	4	60.0	...	90	11	28	23†	50	0.00	...	0.00	0.0	0	22	7	1	nw.	C. H. Butts.
Towner	do	1,475	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	B. Bagley.
University	Grand Forks	830	17	58.4	+ 3.0	86	9	32	24†	45	0.67	− 1.43	0.17	0.0	8	23	6	1	n.	G. W. Stewart.
Wahpeton	Richland	962	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	E. G. Burch.
Walhalla	Pembina	966	4	60.9	...	90	11†	32	24†	46	0.62	...	0.61	0.0	2	21	9	0	w.	
Westhope	Bottineau	...	2	60.2	...	88	11†	31	22	45	1.38	...	0.72	0.0	5	21	3	6	sw.	J. D. Currie.
Willow City	do	1,471	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	19	60.4[a]	− 0.6	89	10	38[a]	27	35[a]	2.85	− 0.61	0.90	0.0	6	6	20	4	se.	Edward Carey.
Alexandria§§	Douglas	1,391	15	60.8	+ 2.7	87	12	36	23	39	2.64	+ 0.45	1.20	0.0	6	17	0	13	nw.	P. O. Unumb.
Angus	Polk	870	7	58.4	...	88	10	31	24	44	2.58	...	0.80	0.0	8	18	4	8	s.	F. A. Wilson.
Bagley	Clearwater	...	3	56.1	...	84	12	28	24	41	1.67	...	0.40	0.0	6	15	11	4	sw.	Edward T. Teitsworth.
Baudette	Beltrami	...	...	55.6	...	83	12	28	24	46	4.69	...	2.00	0.0	9	18	7	5	sw.	Franz W. Schmidt.
Beardsley	Bigstone	1,090	16	61.6	+ 0.8	89	11	33	5	39	1.36	− 0.71	0.42	0.0	6	16	15	5	se.	Roy A. Smith.
Beaulieu	Mahnomen	1,200	7	58.5[d]	...	83[d]	12	33[d]	24	36[d]	...	...	0.80	0.0	3	11	8	7	se.	Dr. L. A. Parkinson.
Bird Island	Renville	1,039	19	60.3	− 0.5	86	10	36	1	39	3.18	+ 0.13	0.85	0.0	9	14	10	6	nw.	Dr. F. L. Puffer.
Caledonia§§	Houston	1,179	16	58.2	− 2.7	79	10	39	1	31	5.01	+ 0.82	2.60	0.0	9	13	10	7	se.	W. D. Bedlen.
Campbell§§	Wilkin	984	...	59.1[a]	...	89[a]	11	32[a]	5	44[a]	...	...	0.54	0.0	7	16	1	12	se.	J. T. Neiseas.
Cass Lake§§	Cass	1,300	3	...	...	...	...	...	...	...	2.17	...	0.90	0.0	5	...	...	...	...	C. W. Burns.
Collegeville	Stearns	1,282	16	59.3	− 1.4	79	12	37	1	32	1.69	− 0.90	0.75	0.0	8	18	4	8	se.	Fridolin Tennbreull.
Crookston§§	Polk	863	19	58.4	+ 1.7	85	11	36	15	36	1.56	− 0.47	0.73	0.0	6	18	4	8	s.	A. G. Anderson.
Detroit§§	Becker	1,364	13	58.2	+ 1.6	87	12	29	24	42	1.32	− 1.44	0.48	0.0	5	20	7	3	sw.	G. W. Peoples.
Fairmont, (near)	Martin	753	22	59.8	− 1.0	81	10	39	5	27	3.83	+ 0.92	1.31	0.0	7	11	16	3	s.	W. F. Wheeland.
Faribault	Rice	1,003	12	58.7	− 3.2	83	10	35	1†	33	4.52	+ 0.76	1.73	0.0	13	13	10	7	se.	A. R. T. Wylie.
Farmington	Dakota	902	21	59.4	− 0.9	85	10	37	1	31	6.09	+ 2.72	3.14	0.0	9	11	6	13	se.	E. D. Akin.
Fergus Falls	Ottertail	1,210	17	60.3	+ 1.3	83	11	37	23†	29	1.39	− 0.87	0.44	0.0	8	16	10	4	se.	Chas. E. Kissenger.
Fort Ripley	Morrison	1,135	3	57.5	...	84	11†	29	5	44	1.93	...	1.44	0.0	4	18	0	12	s.	J. J. Tucker.
Fosston	Polk	1,288	...	57.6	...	83	12	34	24	40	2.47	...	0.89	0.0	6	16	11	3	s.	O. N. Hem.
Glencoe	McLeod	1,006	13	59.6	0.00	87	10	36	1†	36	5.79	+ 2.10	3.50	0.0	7	14	14	2	se.	C. G. Selvig.
Grand Meadow	Mower	1,338	22	59.8	− 0.1	85	10	35	27	34	5.39	+ 2.19	2.07	0.0	8	13	7	10	sw.	C. F. Greening.
Hallock	Kitson	815	10	58.4	+ 3.5	86	9†	27	24	44	0.82	− 2.32	0.39	0.0	5	19	4	7	s.	D. A. Robertson.
Halstad§§	Norman	870	3	58.2	...	88	11	33	24	43	1.34	...	0.41	0.0	7	16	6	8	sw.	A. G. Holstrom.
Hinckley	Pine	1,050	4	59.8[d]	...	82[b]	11	30[d]	24	36[d]	...	...	0.40	0.0	4	12	2	14	...	W. R. Newman.
International Falls	Koochiching	...	1	55.2	...	82	12	28	24	41	2.93	...	1.39	0.0	6	20	4	6	nw.	Rees Roe.
Kelliher	Beltrami	...	3	57.0	...	81	12	26	24	40	2.08	...	0.88	0.0	6	16	12	2	se.	A. Gilmour.
Lake Crystal	Blue Earth	...	2	59.4	...	81	10	39	23†	27	3.31	...	1.15	0.0	5	18	7	5	nw.	W. P. Cobb.
Leech Lake Dam	Cass	1,300	21	56.2	+ 0.8	80	12	28	24	41	2.13	− 0.72	0.83	0.0	6	7	22	1	se.	Hans Olesen.
Litchfield	Meeker	1,129	1	57.9	...	80	11	38	23	33	3.45	...	1.88	0.0	7	17	5	8	w.	N. Y. Taylor.
Little Falls	Morrison	1,117	3	60.0	...	86	11	35	6†	34	0.91	...	0.51	0.0	4	14	14	2	se.	Maurice Coleman.
Long Prairie	Todd	1,299	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	A. W. Sheets.
Lynd (2)	Lyon	...	17	59.6	− 1.0	85	12†	32	5	40	1.19	− 1.52	0.50	0.0	6	16	8	6	sw.	Jacob Rouse.
Mankato§§	Blue Earth	747	10	...	...	...	...	...	...	...	3.98	+ 1.03	1.26	0.0	8	14	4	12	se.	Sadie H. Blake.
Milaca	Millelacs	1,072	12	57.4	+ 0.3	81	12	28	1	40	2.86	− 0.63	1.70	0.0	7	13	9	8	sw.	C. H. Foss.
Milan	Chippewa	995	15	59.8	− 0.2	86	10	35	5	37	1.85	− 0.30	0.67	0.0	8	6	20	4	nw.	O. K. Opjorden.
Minneapolis (1)	Hennepin	918	18	61.0	− 1.4	84	10	43	24	26	2.98	− 0.68	0.98	0.0	13	12	9	9	se.	U. S. Weather Bureau.
Minneapolis (2)**§	Hennepin	850	16	59.0	− 1.0	85	10	35	24	...	2.93	− 1.10	0.80	0.0	12	14	9	7	s.	J. H. Ashenbeck.
Montevideo§§	Chippewa	900	19	61.6	+ 0.3	88	6†	37	5	44	2.43	+ 0.27	0.81	0.0	6	12	8	10	se.	Lloyd G. Moyer.
Moorhead	Clay	935	28	60.0	+ 3.4	88	12	36	5	38	1.44	− 0.86	0.64	0.0	5	16	12	2	se.	U. S. Weather Bureau.
Mora	Kanabec	...	4	57.2	...	83	12	29	5†	40	3.07	...	1.50	0.0	10	15	7	8	nw.	Hans Peterson.
Morris	Stevens	1,170	24	59.8	+ 0.6	86	11	34	5	41	2.02	− 0.25	1.22	0.0	5	22	4	4	nw.	D. T. Wheaton.
New London	Kandiyohi	1,215	15	59.7	− 0.8	86	12	36	24	45	2.31	− 0.06	1.20	0.0	9	18	10	2	se.	Harold Swenson.
New Richland	Waseca	1,180	15	60.5	− 1.7	85	10	37	5	33	2.89	...	0.78	0.0	7	13	13	4	sw.	N. O. Tyrholm.
New Ulm§§	Brown	791	29	60.6	− 1.1	87	10	38	23	38	3.93	+ 0.85	1.20	0.0	9	13	1	16	s.	A. J. Eckstein.
Osakis	Douglas	1,343	2	59.2	...	83	11	33	24	37	3.02	...	1.13	0.0	8	17	5	8	n.	John B. Johnson.
Park Rapids§§	Hubbard	1,426	19	57.1	+ 1.5	84	12	32	24	38	1.77	− 0.42	0.85	0.0	6	17	3	10	s.	Dr. P. A. Walling.
Pine River Dam	Crow Wing	1,251	22	58.2	+ 1.2	79	12	31	30	41	2.55	− 0.15	1.20	0.0	6	16	13	1	w.	Neil McKay.
Pokegama Falls	Itasca	1,290	22	55.6	+ 1.6	76	10	28	24†	42	4.57	+ 1.72	2.70	0.0	7	17	8	5	sw.	Arthur L. Mampel.
Red Lake	Beltrami	...	1	58.0	...	83	12	30	24	37	2.77	...	1.21	0.0	7	10	14	6	nw.	A. C. Goddard.
Red Wing	Goodhue	708	20	61.8	+ 0.9	85	10	43	1†	31	6.88	+ 3.33	2.75	0.0	6	15	6	9	se.	F. A. Whittier.
Red Wing (river)§§	do	680	10	...	...	...	...	...	...	...	7.38	+ 3.83	2.98	0.0	11	16	0	14	se.	Louis Bach.
Redwood Falls	Redwood	1,033	2	61.9	...	88	10	38	1†	35	2.33	...	0.65	0.0	7	17	9	4	nw.	N. B. Andersen.
Reeds Landing§§	Wabasha	681	11	...	...	...	...	...	...	...	6.52	+ 2.64	3.52	0.0	9	14	6	10	se.	John Deschneau.
Rochester§§	Olmstead	991	5	57.2	...	84	11	34	1†	36	3.45	...	0.95	0.0	8	10	8	12	s.	S. R. Case.
Roseau	Roseau	1,040	2	57.2	...	86	12	22	24	43	3.14	...	1.65	0.0	3	16	9	5	se.	
St. Charles§§	Winona	850	18	59.0	− 2.2	83	10	33	1	38	4.04	+ 0.44	1.43	0.0	9	17	4	9	nw.	S. W. Gleason.
St. Cloud	Sherburne	1,020	31	59.4	+ 0.2	82	12	33	24	34	4.06	+ 0.74	2.63	0.0	8	13	10	7	se.	Jos. H. Capser.
St. Paul	Ramsey	837	38	60.6	+ 0.3	84	10	42	1	28	4.06	+ 0.64	1.25	0.0	13	13	9	8	e.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for September, 1909. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota—Cont'd.																				
St. Peter	Nicollet	840	16	62.0	+ 0.5	85	11	36	5	34	3.84	+ 0.07	1.08	0.0	8	21	5	4	s.	Charles A. Cavanaugh.
Sandy Lake Dam	Aitkin	1,234	16	56.4	+ 0.3	79	12	31	24	35	1.95	− 0.71	1.25	0.0	5	22	5	3	se.	J. W. Comstock.
Shakopee	Scott	750	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State Sanitorium	Cass	.....	1	57.6	.....	78	12	34	24	30	2.28	.....	1.28	0.0	6	17	9	4	se.	Dr. W. J. Marcley.
Stillwater‡‖	Washington	694	4	.....	.....	.....	.....	.....	.....	.....	5.70	.....	1.70	0.0	11	17	3	10	sw.	W. B. Nease.
Taylors Falls	Chisago	.....	2	60.2	.....	82	12	35	1†	40	4.49	.....	0.82	0.0	10	18	5	7	s.	Mpls. Gen. Elec. Co.
Wabasha	Wabasha	662	17	61.4[a]	− 1.0	85[a]	10	36[a]	1†	37[a]	.....	.....	2.35	0.0	4	.....	.....	.....	s.	Herman Yost.
Warroad	Roseau	.....	.....	55.8	.....	84	12	25	24	39	4.15	.....	2.25	0.0	8	17	9	4	sw.	John Sawyer.
West Concord	Dodge	1,232	1	59.0	.....	84	10	37	1	31	4.09	.....	1.03	0.0	10	11	14	5	nw.	O. H. Orcutt.
Willow River	Pine	1,046	11	55.0	+ 2.2	80	12	28	24	38	3.98	+ 0.27	1.77	0.0	7	14	11	5	n.	J. A. Brandt.
Windom	Cottonwood	1,336	3	61.4	.....	89	10	34	5	42	1.93	.....	0.77	0.0	6	11	15	4	nw.	Taber C. Richmond.
Winnebago‡‖	Faribault	1,100	10	61.2	− 0.2	88	10	39	23	38	3.93	+ 0.79	1.46	0.0	9	20	2	8	se.	H. H. Haight.
Winnibigoshish	Itasca	1,300	21	58.2	+ 2.0	78	10	32	24	33	2.48	− 0.69	0.85	0.0	6	18	9	3	se.	John Duncan.
Winona	Winona	680	14	61.4	− 0.5	87	10	37	26	31	4.66	+ 1.02	1.85	0.0	11	15	6	9	se.	P. C. Meyers.
Worthington‡‖	Nobles	979	14	58.7	− 2.2	81	10	36	30	36	2.02	− 1.27	1.01	0.0	5	17	4	9	s.	W. I. Carpenter.
Zumbrota	Goodhue	979	14	59.3	− 1.4	84	16	35	1†	34	5.10	.....	2.75	0.0	11	14	12	4	nw.	W. C. Rowell.
South Dakota.																				
Millbank	Grant	1,148	20	60.0	− 1.0	90	10	34	1	45	1.55	− 0.31	0.71	0.0	6	15	6	9	nw.	T. T. Patridge.
Wisconsin.																				
Antigo	Langlade	1,489	14	57.7	.....	80	20†	27	27	42	2.01	.....	0.81	0.0	5	11	9	10	sw.	E. C. Larzeler.
Barron	Barron	1,115	16	56.8[a]	− 1.5	78[a]	21	28	1	38	4.27	+ 1.14	1.18	0.0	8	17	11	2	se.	W. A. Kent.
Beloit	Rock	750	19	61.0[b]	− 2.0	84[b]	13	37	27	29	3.09	− 0.23	0.74	0.0	6	16	0	14	n.	Smith Observatory.
Brodhead	Green	812	11	61.7	− 1.4	87	13	36	27	33	2.32	− 1.69	0.60	0.0	7	20	5	5	nw.	H. D. Kirkpatrick.
Burnett	Dodge	880	5	59.4	.....	86	13	34	26†	30	2.15	.....	0.61	0.0	5	14	7	9	se.	Geo. W. Smith.
Delavan	Walworth	920	16	61.0	− 1.7	88	13	33	27	34	3.58	− 0.93	1.13	0.0	9	15	3	12	se.	E. S. Austin.
Dodgeville	Iowa	1,116	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. H. Butler.
Downing	Dunn	983	6	57.0	.....	84	10	27	1	43	4.29	.....	1.05	0.0	6	8	2	20	sw.	E. F. Stoddard.
Eau Claire	Eau Claire	800	18	59.9	− 0.9	84	10	34	27	35	6.84	+ 2.91	2.99	0.0	10	15	9	6	se.	R. D. Whitford.
Ellsworth	Pierce	1,068	1	61.4[j]	.....	87[j]	10	33[j]	2	26	.....	.....	.....	0.0	.....	.....	.....	.....	.....	H. G. Woods.
Glidden	Ashwood	1,519	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Sell.
Grand Rapids	Wood	1,021	10	59.2	− 1.5	84	10	29	27	40	3.15	+ 0.12	1.16	0.0	8	21	2	7	s.	W. B. Raymond.
Grantsburg	Burnett	1,095	18	57.1	− 1.3	82	12	29	24	47	3.93	− 0.40	2.00	0.0	5	13	6	11	sw.	Theodore Olsen.
Hancock	Waushara	1,091	17	59.4	− 1.4	81	20	33	27	33	3.43	+ 0.53	1.10	0.0	5	18	4	8	sw.	F. B. Hamilton.
Hatfield	Jackson	973	1	60.6[f]	.....	89[b]	20	21[f]	30	51	3.10	.....	1.07	0.0	5	19	0	11	w.	W. S. Woods.
Hayward	Sawyer	1,197	18	56.4	− 0.6	79	21	27	1	44	2.25	− 1.97	0.85	0.0	6	11	6	13	s.	W. E. Swain.
Hillsboro	Vernon	1,000	18	57.8	− 2.7	83	13	28	25†	36	3.11	+ 0.02	1.37	0.0	5	13	13	4	se.	E. V. Wernick.
Koepenick	Langlade	1,683	18	54.3	− 4.7	78	13†	21	5	45	2.75	− 1.57	1.97	0.0	9	.....	.....	.....	s.	E. S. Koepenick.
La Crosse	La Crosse	714	37	60.7	− 1.0	83	10	37	27	29	4.03	− 0.09	1.94	0.0	9	11	7	12	s.	U. S. Weather Bureau
Lake Mills	Jefferson	897	18	60.4	− 1.8	87	13	34	27	31	1.52	− 1.88	0.52	0.0	9	9	16	5	sw.	S. N. D. Smith.
Lancaster	Grant	1,070	19	61.0	− 0.4	84	10†	34	27	36	2.20	− 1.26	0.91	0.0	7	16	8	6	se.	Edward Pollock.
Long Lake	Oneida	1,592	1	54.6	.....	79	20	20	26	43	2.50	.....	1.70	0.0	9	12	8	10	nw.	Louie Frank.
Madison	Dane	974	31	60.8	− 0.3	84	13	43	26	27	2.20	− 0.98	0.72	0.0	9	11	9	10	se.	U. S. Weather Bureau.
Mather	Juneau	962	.....	57.3	.....	84	20	22	27	43	3.50	.....	1.14	0.0	8	8	3	19	e.	Frank Evans.
Mauston	....do	882	13	59.0	− 1.5	81	13†	30	26	33	2.73	− 0.56	1.23	0.0	5	14	6	10	se.	E. L. Hitchcock.
Meadow Valley	....do	974	18	58.6	− 1.4	85	10†	25	27	44	3.77	+ 0.21	1.70	0.0	8	5	18	7	sw.	C. H. Johnson.
Medford	Taylor	1,420	18	58.1	− 1.3	82	10	29	27	39	3.54	− 0.55	1.37	0.0	6	12	14	4	s.	William Zeit.
Merrill	Lincoln	1,267	3	58.8	.....	86	10	28	25†	45	2.33	.....	1.24	0.0	8	22	3	5	sw.	F. M. McElroy.
Minocqua	Oneida	1,604	5	56.2	.....	76	20†	34	25†	30	3.37	.....	2.00	0.0	5	21	3	6	s.	Charles W. Hooper.
Mondovi	Buffalo	738	1	59.2	.....	85	10	30	1	38	6.98	.....	2.65	0.0	11	15	10	5	sw.	Dr. Charles Hebard.
Mount Horeb	Dane	1,226	5	60.2	.....	84	13	35	26	37	2.37	.....	0.70	0.0	6	17	3	10	nw.	W. M. Lewis.
Muscoda	Grant	666	.....	60.8	.....	89	10	25	27	48	2.40	.....	0.90	0.0	7	8	17	5	e.	Henry Eckstein.
Neillsville	Clark	996	20	59.4	+ 0.3	84	9	29	27	44	3.33	− 0.49	1.49	0.0	6	.....	.....	.....	nw.	William Heaslett.
New Richmond	St. Croix	990	4	59.6[a]	.....	82[a]	21	34[a]	15†	40	4.87	.....	1.04	0.0	11	.....	.....	.....	nw.	F. R. Van Meter.
Osceola‡‖	Polk	806	18	58.8	− 0.8	83	10	30	1	41	3.80	− 0.30	1.00	0.0	8	14	9	7	e.	C. W. Staples.
Portage	Columbia	809	13	60.1	− 0.9	84	13	34	27	32	3.30	+ 0.36	1.65	0.0	7	19	7	4	nw.	James Clear.
Prairie du Chien‡‖	Crawford	690	22	61.7	− 2.0	88	11†	35	26	43	2.26	− 1.60	0.88	0.0	8	12	8	10	nw.	John Ducharme.
Prentice	Price	1,551	11	53.6	− 3.0	74	11†	23	27	44	2.51	− 1.66	1.81	0.0	6	12	6	12	sw.	J. G. Lash.
Rhinelander	Oneida	1,550	4	57.4[c]	.....	82[c]	22	27[c]	26	36	2.90	.....	1.70	0.0	12	9	12	9	sw.	John Lind.
Sauk City	Sauk	758	1	61.0	.....	90	13	30	27†	38	.....	.....	.....	0.0	.....	7	18	5	.....	K. Derleth.
Shullsburg	Lafayette	1,019	3	60.4	.....	85	13	33	27	32	3.43	.....	1.73	0.0	6	14	5	11	s.	H. B. Chamberlin.
Solon Springs	Douglas	1,083	2	55.4	.....	79	21	27	26†	44	2.86	.....	1.77	0.0	4	18	3	9	sw.	J. M. Sayles.
Spooner	Washburn	1,104	14	56.2	− 3.6	77	12	31	1†	37	2.48	− 0.56	0.68	0.0	8	21	2	7	sw.	H. A. Bresee.
Stanley	Chippewa	1,082	5	58.0	.....	83	10	28	1	41	4.14	.....	1.34	0.0	9	11	9	10	se.	L. E. Scott.
Stevens Point	Portage	1,113	16	58.0[c]	− 2.4	83[c]	13†	27[c]	27	39	3.84	+ 0.62	1.65	0.0	6	.....	.....	.....	sw.	G. E. Culver.
Valley Junction	Monroe	930	17	57.0	− 3.1	82	20	25	27	41	3.93	+ 0.17	1.31	0.0	7	11	6	13	w.	F. Muermann.
Viroqua	Vernon	1,412	18	60.0	− 0.8	82	10	35	1	34	3.44	− 0.40	0.96	0.0	10	14	9	7	se.	H. E. Rogers.
Vudesare	Vilas	1,600	1	53.2	.....	79	20	24	26	40	0.63	.....	0.27	0.0	4	19	6	5	w.	L. L. Thomas.
Watertown‡‖	Jefferson	824	17	58.7	− 2.5	85	13	33	27	35	2.58	− 0.73	0.80	0.0	8	12	12	6	se.	Charles J. Salick.
Waukesha (1)	Waukesha	970	13	.....	.....	.....	.....	.....	.....	.....	3.32	− 0.15	0.91	0.0	10	.....	.....	.....	.....	A. V. B. Dey.
Waukesha (2)	....do	864	1	60.4	− 1.8	87	13	36	2†	36	3.14	.....	1.00	0.0	8	10	18	2	nw.	Carroll College.
Wausau	Marathon	1,212	17	58.0	− 0.4	81	20	30	27	35	3.01	− 0.41	1.24	0.0	9	12	13	5	se.	H. A. Beilke.
Weyerhaeuser	Rusk	1,297	2	56.4	.....	80	10	25	27	40	2.33	.....	0.77	0.0	9	15	7	8	se.	Miss Etta Stiles.
Whitehall	Trempealeau	675	17	58.1	− 3.4	87	11	30	1†	38	3.20	− 1.32	1.15	0.0	6	5	24	1	w.	H. A. Towner.
Iowa.																				
Albia‡. ‖	Monroe	959	10	62.7	− 2.1	88	12	38	27†	37	3.63	+ 0.07	0.84	0.0	11	14	5	11	sw.	J. D. Chenoweth.
Algona‡	Kossuth	1,213	34	60.6	− 1.3	85	10	38	27	34	4.71	+ 1.57	1.88	0.0	9	15	7	8	se.	Dr. F. T. Seeley.
Alta‡‖	Buena Vista	1,513	17	60.8	− 2.1	85	10	37	23	36	2.15	− 1.03	0.50	0.0	12	12	12	6	s.	David E. Hadden.
Alta (near)	Buena Vista	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.16	− 1.57	0.43	0.0	12	.....	.....	.....	.....	W. J. Minard.
Amana	Iowa	721	31	62.1	− 0.4	87	13	34	27	35	3.96	+ 0.71	3.35	0.0	4	15	7	8	se.	C. Schadt.
Ames	Story	926	27	61.8	− 1.7	89	13	33	27	34	2.82	− 0.57	1.00	0.0	8	13	7	10	s.	Iowa State College.
Baxter‡	Jasper	998	8	62.3[a]	.....	86[a]	10	36[a]	23†	39[a]	2.20	.....	1.14	0.0	8	17	6	7	se.	W. R. Vandike.
Belle Plaine	Benton	828	18	62.4	− 1.2	86	13	36	24†	37	1.84	− 1.12	1.06	0.0	7	14	8	8	se.	S. P. Van Dike.
Bloomfield‡‖	Davis	.....	.....	66.7	.....	93	10	36	27	46	3.55	.....	1.54	0.0	7	13	8	9	se.	C. R. Davis.
Bonaparte‡	Van Buren	.....	17	64.4	− 3.0	94	13	37	27	32	3.26	− 0.78	1.59	0.0	8	.....	.....	.....	.....	B. R. Vale.
Boone‡‖	Boone	1,134	3	61.8	.....	84	12	41	24†	35	4.24	.....	1.26	0.0	12	15	4	11	.....	Carl Fritz Henning.
Britt‡	Hancock	1,236	11	60.7	− 1.0	84	10†	35	23	33	3.70	− 0.04	1.16	0.0	10	6	19	5	s.	George P. Hardwick.
Buckingham	Tama	.....	8	.....	.....	.....	.....	.....	.....	.....	2.06	.....	1.05	0.0	5	18	7	5	.....	W. A. Daniel.
Burlington‡. ‖	Des Moines	544	12	64.4	− 1.8	91	12†	39	27	41	4.47	+ 1.35	1.91	0.0	10	20	1	9	s.	Max E. Poppe, jr.
Carroll‡‖	Carroll	1,265	18	60.6	− 2.4	87	9	38	22†	37	5.23	+ 2.34	1.59	0.0	9	15	4	11	se.	Mrs. Joseph J. Wolfe.
Cedar Rapids‡‖	Linn	733	26	62.6	− 1.4	88	12†	38	27†	42	3.91	+ 1.09	2.56	0.0	4	13	8	9	se.	W. J. Greene.
Charles City	Floyd	1,015	20	59.6	− 2.1	84	20	36	27	31	3.12	+ 0.32	1.66	0.0	9	7	11	12	se.	U. S. Weather Bureau.
Clear Lake‡	Cerro Gordo	1,241	9	63.0	+ 0.8	88	10	38	26†	32	4.54	.....	1.20	0.0	8	16	0	14	s.	Oscar Stevens.
Clinton	Clinton	593	40	61.8	− 1.5	90	13	32	30	37	2.27	− 1.04	0.60	0.0	8	11	15	4	s.	Luke Roberts.
Columbus Junction‡	Louisa	595	7	63.8	.....	90	13	37	27	33	2.39	.....	1.16	0.0	6	23	4	3	se.	J. B. Johnston.
Davenport	Scott	580	36	63.6	− 1.1	91	13	40	27	30	1.50	− 1.64	0.76	0.0	7	17	4	9	e.	U. S. Weather Bureau.
Decorah	Winneshiek	975	15	59.6	− 2.5	84	10†	32	27	32	3.17	− 0.56	1.08	0.0	6	.....	.....	.....	.....	F. H. Baker.
Delaware	Delaware	1,083	17	60.4	− 1.4	82	20	36	27	36	2.86	− 0.41	1.18	0.0	7	15	10	5	s.	William Ball.

TABLE 1—*Climatological data for September, 1909. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Iowa—Cont'd.																			
Des Moines	Polk	861	31	63.8	− 1.2	89	12	41	27	34	2.06	− 1.01	0.56	0.0	9	10	9	11	se.	U. S. Weather Bureau.
De Soto§	Dallas	866	8	64.8	.....	92	12	34	27	42	3.39	.....	1.39	0.0	8	18	2	10	sw.	R. D. Minard
Dows§	Wright	1,142	8	60.6	− 1.1	87	10	34	27	36	3.58	+ 0.09	1.43	0.0	7	13	6	11	s.	G. R. Flett.
Dubuque	Dubuque	639	35	62.2	− 1.4	87	13	36	27	32	4.28	+ 0.69	3.25	0.0	9	15	6	9	s.	U. S. Weather Bureau.
Earlham	Madison	.....	6	63.0	+ 0.9	90	12	32	27	36	4.33	.....	2.17	0.0	7	19	1	10	se.	George Phillips.
Elkader	Clayton	727	27	59.8	− 2.7	89	11	30	27	49	2.15	− 1.69	1.25	0.0	4	17	0	13	nw.	Charles Reinecke.
Elma	Howard	.....	.....	.....	.....	82	10	.....	.....	.....	3.08	.....	0.54	0.0	10	8	16	6	se.	H. A. Moore.
Estherville§§	Emmet	1,298	12	58.4	− 2.3	82	18†	36	35	37	4.69	+ 1.46	2.20	0.0	8	19	0	11	s.	A. O. Peterson.
Fairfield	Jefferson	.....	14	64.4[b]	+ 0.4	94[b]	13	34[a]	27	41[b]	2.17	− 1.30	1.40	0.0	9	17	6	7	sw.	R. M. McKenzie.
Fayette§	Fayette	1,003	18	59.4[a]	− 2.9	88[a]	10	30[a]	27	36[a]	2.77	− 0.46	1.13	0.0	8	18	7	5	se.	R. Z. Latimer.
Forest City§, §§	Winnebago	1,226	14	60.8	− 1.2	88	10	38	24	38	3.60	− 0.02	2.07	0.0	5	17	3	10	sw.	J. A. Peters.
Fort Dodge§§	Webster	1,126	8	61.7	.....	91	10	37	27	43	3.73	.....	1.27	0.0	6	16	1	13	sw.	J. F. Monk.
Fort Madison	Lee	516	59	.....	.....	.....	.....	.....	.....	.....	4.24	+ 0.43	1.82	0.0	6	14	6	10	s.	Miss L. A. McCready.
Gilman	Marshall	1,052	9	.....	.....	.....	.....	.....	.....	.....	1.39	.....	0.44	0.0	6	.....	.....	.....	.....	J. L. Wylie.
Grand Meadow	Clayton	1,180	17	59.2	− 2.7	80	10†	35	26†	33	2.68	− 0.95	1.02	0.0	11	12	8	10	sw.	F. L. Williams.
Greene	Butler	.....	9	61.4	− 2.1	87	10	35	27	35	3.69	.....	1.40	0.0	10	5	13	12	e.	J. L. Cole.
Grinnell	Poweshiek	1,023	16	64.2	+ 0.4	89	13	36	27	39	1.86	− 0.49	0.70	0.0	9	11	9	10	s.	D. W. Brainard.
Grundy Center§	Grundy	976	17	62.8	− 0.3	88	10	31	30	40	3.87	+ 0.62	2.20	0.0	8	.....	.....	.....	s.	J. B. Calderwood.
Guthrie Center§	Guthrie	1,077	13	63.0	− 0.9	86	11†	36	27	31	4.33	+ 1.24	1.36	0.0	11	16	6	8	se.	D. G. Beardsley.
Hampton	Franklin	1,155	18	62.6	− 0.3	91	10	36	27	34	4.26	+ 6.70	1.40	0.0	8	9	13	8	se.	E. C. Grenelle.
Humboldt	Humboldt	1,095	17	61.5	− 1.0	86	10	30	27	38	4.22	+ 1.05	1.10	0.0	9	17	4	9	sw.	Henry S. Wells.
Independence§	Buchanan	921	43	61.3	− 0.4	85	10	35	27	35	2.44	− 1.51	1.35	0.0	7	17	7	6	se.	George Donohoe.
Indianola	Warren	969	17	64.2	− 1.3	90	12	41	27	33	2.74	− 0.36	0.99	0.0	8	12	9	9	se.	John L. Tilton.
Iowa City§§	Johnson	683	49	62.2	− 1.4	88	13	33	27	39	2.43	− 1.32	1.35	0.0	7	18	2	10	se.	.....
Iowa Falls§§	Hardin	1,170	15	59.8	− 1.8	85	10†	33	27	43	2.63	− 0.34	1.27	0.0	6	16	2	12	se.	J. B. Parmelee.
Jefferson§	Greene	.....	.....	64.2[c]	.....	88[c]	10†	36[c]	27	39[c]	.....	.....	1.72	0.0	.....	.....	.....	.....	s.	G. W. Jackson.
Keokuk	Lee	547	37	65.7	− 0.7	93	13	42	27	29	3.46	− 0.51	2.08	0.0	9	15	6	9	se.	U. S. Weather Bureau.
Keosauqua§§	Van Buren	644	16	63.4	− 3.5	93	13	34	27	43	3.14	− 1.26	1.04	0.0	12	13	7	10	.....	J. H. Landes.
Knoxville§	Marion	920	12	64.6	− 1.6	88	12	38	27	37	2.96	− 0.56	1.05	0.0	7	10	10	10	.....	Casey & Belville.
Lacona	Warren	.....	9	.....	.....	.....	.....	.....	.....	.....	3.21	.....	1.00	0.0	7	13	10	7	.....	J. B. Alter.
Le Claire	Scott	576	.....	.....	.....	.....	.....	.....	.....	.....	2.03	− 1.75	0.49	0.0	8	.....	.....	.....	.....	Miss Margaret T. Disney.
Marshalltown§§	Marshall	947	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mason City§	Cerro Gordo	1,132	11	59.0	− 4.0	82	10	33	27	31	3.75	+ 1.39	1.70	0.0	9	11	13	6	s.	J. S. Mills.
Mount Pleasant§	Henry	729	26	63.7	− 1.3	89	13†	38	27	30	2.27	− 1.41	0.94	0.0	7	17	7	6	sw.	J. W. Edwards.
Muscatine	Muscatine	.....	49	.....	.....	.....	.....	.....	.....	.....	1.96	− 1.76	0.66	0.0	9	.....	.....	.....	.....	William Molis.
New Hampton§	Chickasaw	1,169	11	59.4	− 2.3	79	20	37	23†	29	2.38	− 1.13	0.91	0.0	7	16	6	8	w.	A. F. Kemman.
Newton§	Jasper	944	19	63.6	+ 0.7	84	12†	40	27	33	1.93	− 1.27	0.70	0.0	6	12	9	9	s.	J. P. Beatty.
Northwood§	Worth	1,222	12	60.4[b]	− 0.4	81[d]	10†	36	27	31[d]	4.09	+ 0.74	1.23	0.0	10	18	4	8	nw.	Charles H. Dwelle.
Olin§	Jones	760	11	59.2	− 3.9	87	18†	33	28	54	2.24	− 0.99	1.80	0.0	1	19	4	7	s.	C. M. Miles.
Osage	Mitchell	1,184	17	61.8	+ 1.8	88	10	35	27	35	3.20	− 0.36	1.35	0.0	6	12	8	10	se.	A. D. Bundy.
Oskaloosa§	Mahaska	843	24	63.2	− 1.3	85	12	37	27	32	3.73	+ 0.70	0.93	0.0	9	18	0	12	se.	Joseph Boyd.
Ottumwa	Wapello	649	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pella	Marion	877	6	62.8	.....	88	11	32	27	38	1.70	.....	0.56	0.0	7	.....	.....	.....	se.	John H. Ver Steeg.
Perry§	Dallas	975	7	62.8	.....	87	12	38	27	34	5.03	.....	1.50	0.0	10	10	13	7	se.	J. A. Harvey.
Plover	Pocahontas	1,426	12	61.2	− 1.6	87	9	35	5†	37	3.07	− 1.32	0.88	0.0	7	19	6	5	se.	J. S. Smith.
Pocahontas§	....do	.....	4	60.0	.....	86	10	38	5†	30	3.07	.....	0.68	0.0	8	12	8	10	se.	F. E. Hronek.
Ridgeway§	Winneshiek	1,215	10	62.0	− 1.2	88	10	36	1	36	3.74	− 0.57	1.59	0.0	10	16	9	5	s.	Arthur Betts.
Rockwell City§	Calhoun	.....	12	61.6	− 2.2	85	9†	36	23†	40	5.70	+ 2.52	1.75	C.0	8	17	2	11	.....	C. M. Randall.
Sac City	Sac	1,278	26	61.6	+ 0.1	84	10	40	28	36	2.73	− 0.55	0.62	0.0	12	15	4	11	nw.	E. N. Baily.
St. Charles§	Madison	1,070	7	64.8	.....	93	12	41	27	32	2.29	.....	0.58	0.C	6	18	4	8	se.	R. D. Minard.
Sigourney§	Keokuk	877	12	64.0	− 1.6	89	13	38	27	32	4.03	+ 1.61	2.22	0.0	6	9	17	4	.....	J. T. Parker.
Stockport§	Van Buren	.....	6	63.7	.....	90	13	31	27	43	3.13	− 1.11	1.09	0.0	9	16	3	11	se.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	12	62.0	− 0.7	84	9†	39	5	31	2.16	− 0.93	0.66	0.0	9	14	6	10	sw.	S. B. Fracker.
Stuart	Guthrie	1,216	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tipton§	Cedar	807	10	64.8	− 1.0	91	13	42	27	33	1.51	− 1.48	1.04	0.0	3	20	5	5	se.	F. K. Gregg.
Toledo§	Tama	856	14	61.0	− 3.1	84	12	32	27	37	1.88	− 1.09	0.70	0.0	5	.....	.....	.....	.....	I. F. Giger.
Wapello§	Louisa	588	10	64.6	− 1.1	90[c]	13	40[c]	27	33[c]	2.33	− 1.11	0.78	0.0	7	19	6	5	.....	G. W. Schofield.
Washington	Washington	769	27	63.4	− 1.2	89	13	37	27	35	3.67	+ 0.99	2.35	0.0	8	11	15	4	se.	Wm. A. Cook.
Waterloo§§	Black Hawk	862	25	62.2	− 0.6	87	10†	36	28	44	2.08	− 1.80	0.94	0.0	9	14	11	5	se.	M. L. Newton.
Waukee	Dallas	1,039	5	63.2	.....	87	12	40	26†	33	2.95	+ 0.32	1.07	C.0	10	11	12	7	sw.	Samuel F. Foft.
Waverly§	Bremer	948	12	61.1	− 1.4	83	10†	37	24†	32	2.60	− 0.34	0.85	0.0	10	9	13	8	s.	H. S. Hoover.
Webster City§	Hamilton	.....	3	64.1	.....	90	10	35	27	37	3.87	.....	1.24	0.0	6	10	15	5	nw.	C. D. Carpenter.
West Bend§	Palo Alto	1,197	14	60.8	− 0.3	84	10	37	23	33	3.72	+ 0.29	1.75	0.0	10	13	7	10	s.	Joseph Dorweiler.
Whitten§	Hardin	1,036	10	62.0	− 0.8	85	12	37	23	32	2.74	− 0.55	1.80	0.0	3	12	14	4	se.	F. P. Butler.
Wilton Junction§	Muscatine	683	13	63.4	− 1.4	89	13	36	27	33	1.48	− 1.84	0.56	0.0	3	18	9	3	w.	William Lang.
Winterset§	Madison	1,129	17	64.4	− 1.2	90	12	40	27	30	2.74	− 0.62	0.75	0.0	8	4	15	11	se.	Robert S. Cooper.
Zearing§	Story	.....	4	62.8	.....	90	10	31	27	46	3.48	.....	2.05	0.0	5	3	22	5	se.	Orley Reese.
Missouri.																				
Darksville	Randolph	826	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Broaddus.
Gorin	Scotland	.....	23	.....	.....	.....	.....	.....	.....	.....	2.49	− 1.69	1.16	0.0	8	15	6	9	se.	J. W. Pulliam.
Hannibal	Marian	534	18	65.6	− 2.3	92	12	36	27	33	3.52	− 0.04	1.28	0.0	10	17	3	10	e.	U. S. Weather Bureau.
Louisiana	Pike	500	31	65.9	− 2.1	92	13	34	28	35	6.42	+ 3.19	3.30	0.0	10	19	2	9	n.	J. T. Farrell.
Mexico	Audrain	797	31	66.2	− 2.7	95	13	35	27†	47	3.63	− 0.34	2.42	0.0	9	18	2	10	se.	J. F. Llewellyn.
Steffenville	Lewis	576	15	66.8	− 1.3	92	12†	38	27	41	3.74	− 0.30	1.48	0.0	8	16	7	7	e.	Frank Hall.
Sublett	Adair	1,000	29	65.9	− 1.0	94	12	35	27	36	3.16	− 1.05	1.10	0.0	5	15	9	6	se.	Lewis Spriggs.
Indiana.																				
Collegeville	Jasper	.....	.....	62.0	.....	89	14	32	26	37	4.26	.....	1.09	0.0	7	3	17	10	se.	Prof. L. C. Klosterman.
Knox§	Starke	716	.....	61.4	.....	85	13	35	27†	36	3.41	.....	1.87	0.0	8	17	7	6	s.	W. R. R. Tatman.
Laporte	Laporte	810	4	62.2	.....	91	13	36	27	35	2.24	.....	1.35	0.0	5	.....	.....	.....	e.	Chas. D. Rakestraw.
Plymouth	Marshall	790	.....	60.8	.....	86	13	35	27	33	3.49	.....	1.08	0.0	6	18	5	7	se.	J. W. Siders.
Illinois.																				
Aledo	Mercer	738	9	62.9	.....	90	13	37	27	34	3.04	.....	1.66	0.0	8	12	11	7	se.	William B. Frew.
Alexander	Morgan	670	16	65.4	− 2.5	93	13	35	27	36	3.89	+ 0.58	1.85	0.0	11	16	5	9	s.	George H. Hall.
Antioch	Lake	861	8	60.9	.....	88	14†	35	2	37	3.62	.....	1.50	0.0	4	10	14	6	sw.	J. C. James, jr.
Ashton	Lee	830	14	61.2	− 2.7	86	13	34	25†	34	1.96	− 1.10	0.81	0.0	8	14	10	6	nw.	E. J. Yenerich.
Astoria	Fulton	650	9	62.4	− 2.7	91	13	33	27	33	4.03	.....	1.10	0.0	10	17	5	8	nw.	Edward V. Bohl.
Aurora	Kane	687	30	61.0	− 2.7	89	13	34	2†	36	3.28	− 0.11	1.82	0.0	5	12	9	9	se.	W. Holden.
Bement	Piatt	700	10	65.4	.....	91	13	37	27	37	3.36	.....	0.90	0.0	6	17	9	4	ne.	Rev. C. S. Adams.
Benton	Franklin	598	7	71.3	.....	95	9	39	27	38	5.62	.....	2.00	0.0	6	13	4	13	sw.	F. H. Stamper.
Bloomington	McLean	840	17	65.0	− 3.0	92	13	37	26	34	2.35	− 1.11	0.96	0.0	6	20	5	5	se.	Prof. H. N. Pearch.
Cairo	Alexander	359	33	69.6	− 0.6	90	3	45	28	28	5.66	+ 3.19	1.55	0.0	11	17	4	9	ne.	U. S. Weather Bureau.
Cambridge	Henry	824	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.0	.....	.....	.....	.....	.....	John H. Seaton.
Carlinville	Macoupin	663	19	66.3	− 3.0	93	13	36	27	36	4.76	+ 1.41	1.41	0.0	11	18	6	6	se.	R. O. Purviance.
Chester	Randolph	380	5	.....	.....	.....	.....	.....	.....	.....	8.78	.....	2.90	0.0	9	24	2	4	se.	F. A. Gollon, jr.
Chicago	Cook	824	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
Coatesburg	Adams	763	15	64.8	− 2.9	92	13	37	27	32	4.99	+ 0.53	2.33	0.0	8	18	4	8	se.	Dr. J. R. Lambert.
Cobden	Union	656	26	70.2	− 0.6	93	3	39	27	37	9.17	+ 5.84	3.15	0.0	5	15	9	6	n.	John Buck.

TABLE 1.—*Climatological data for September, 1909. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.					Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Illinois—Cont'd.																				
Colchester	McDonough	694	7											0.0						
Dakota	Stephenson	929		60.8		86	13	37	27	33	2.23		0.52	0.0	10	15	7	8	e.	Harold Leitzel.
Decatur	Macon	685	17	65.1	− 2.9	91	13	37	27	41	2.79	− 0.53	1.08	0.0	6	22	5	3	ne.	Prof. J. H. Coonradt.
Dixon	Lee	725	19	63.2	− 1.4	90	13†	38	27	35	2.81	− 0.49	1.10	0.0	8	19	4	7	s.	Mrs. E. E. Shaw.
Du Quoin	Perry	459	18	70.6	− 0.4	97	3	38	28	36	5.71	+ 3.16	1.92	0.0	8	18	9	3	se.	G. H. Knetager.
Dwight	Livingston	600	15	63.4	− 1.2	93	13	34	27	38	2.34	− 0.30	0.80	0.0	8	13	7	10	se.	Edward O. Welsh.
Galva	Henry	842	17	63.4	− 2.1	93	13	36	27	35	2.85	− 0.54	0.89	0.0	10	20	1	9	s.	Prof. F. U. White.
Greenville	Bond	635	26											0.0						M. S. Oudyn.
Griggsville	Pike	650	22	66.4	− 1.6	91	13	41	28	32	4.64	+ 0.73	1.86	0.0	8	18	4	8	se.	George F. Kneeland.
Halfway	Williamson	569	13	69.8	− 1.5	97	3	39	27	37	4.68	+ 1.55	1.83	0.0	8	16	11	3	se.	E. L. Hearn.
Havana	Mason	475	16	66.4	− 2.7	94	12†	42	28	31	5.68	+ 1.89	2.12	0.0	9	13	16	1	ne.	F. & C. Borgelt.
Henry	Marshall	500	20	63.2	− 2.2	90	13	37	27†	32	3.93	+ 0.67	1.54	0.0	9	17	6	7	nw.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	14	66.1	− 3.3	92	3†	36	27	42	6.45	+ 3.14	2.80	0.0	7	19	5	6	se.	Ira L. Woodward.
Joliet	Will	541	17	61.8	− 2.8	89	13	38	27	34	3.09	− 0.49	1.11	0.0	8	14	8	8	se.	F. M. Muhlig.
Kishwaukee	Winnebago	730	19	62.4	− 1.1	88	13	36	27	35	3.59	+ 0.53	1.20	0.0	9	15	8	7	se.	George Stevens.
Knoxville §	Knox	775	19	62.4	− 2.4	91	13	35	27	36	3.63	− 0.12	1.25	0.0	5	17	5	8	sw.	C. N. Butt.
La Grange	Cook	657	16	62.1	− 2.0	90	13	37	27	33	3.26	− 0.51	1.17	0.0	5	17	8	5	sw.	Prof. F. E. Sanford.
La Harpe	Hancock	698	30	64.6	− 2.2	90	13	37	27	32	4.68	+ 0.56	2.62	0.0	6	22	2	6	se.	John S. Campbell.
Lanark	Carroll	883	18	61.3	− 1.3	89	13	28	27	41	1.81	− 1.51	0.60	0.0	7	22	1	7	se.	M. N. Wertz.
La Salle	La Salle	536	33	63.5	− 0.4	91	13	39	27	29	3.15	− 0.05	1.35	0.0	7	16	5	9	ne.	U. S. Weather Bureau.
Lincoln	Logan	482	20											0.0						
Martinton	Iroquois	633	21	61.7	− 3.1	92	10	33	27	39	3.82	+ 0.48	1.55	0.0	4	18	7	5	e.	Joseph H. Peltier.
Mascoutah	St. Clair	425	18	71.0	+ 1.1	100	3	34	28	43	4.16	+ 0.81	1.77	0.0	9	18	8	4	nw.	George Henrich.
Minonk	Woodford	745	15	64.8	− 1.3	95	13	35	27	37	1.98	− 1.66	0.73	0.0	4	18	10	2	ne.	O. M. Davison.
Monmouth	Warren	784	16											0.0						Hugh R. Moffet.
Morrison	Whiteside	685	13	61.6	− 2.9	87	13	35	27	37	2.60	− 0.89	0.69	0.0	7	18	4	8	se.	Harold A. Maxwell.
Morrisonville	Christian	638	9	64.8	− 3.1	91	13	35	27	34	3.39		0.92	0.0	8	20	2	8	se.	J. D. Lowis.
Mount Vernon	Jefferson	511	14	67.6	− 2.7	95	3	37	28	41	3.72	+ 0.62	1.92	0.0	7	19	7	4	n.	Theodore P. Stelle.
Oregon	Ogle	702		62.6		89	13	33	27	35	2.79		1.15	0.0	7	15	7	8	se.	Samuel Ray.
Ottawa	La Salle	500	23	63.0	− 2.3	92	13	37	27	32	4.08	+ 0.67	1.38	0.0	7	17	1	12	sw.	Miss Maud M. Harris.
Pana	Christian	692	22	64.5	− 3.2	83	20	34	27	26	3.73	+ 0.35	1.16	0.0	7	24	1	5	nw.	C. W. Sibley.
Peoria	Peoria	609	33	64.0	− 0.3	92	13	35	27	31	3.68	+ 0.56	1.36	0.0	9	16	7	7	se.	U. S. Weather Bureau.
Pontiac	Livingston	546	7	65.2		93	12†	35	27	36	2.15		0.84	0.0	8	17	6	7	s.	George Butterworth.
Riley	McHenry	956	50	61.4	− 0.2	84	12†	37	27	27	3.37	− 0.36	1.25	0.0	10	11	12	7	sw.	John West James.
Rockford	Winnebago	763	13	60.7	− 2.8	85	13	36	27	36	3.41	+ 0.47	0.84	0.0	7	19	1	10		Hosmer C. Porter.
Rushville	Schuyler	670	8	64.8		90	13	38	27	31	3.99		1.45	0.0	6	14	4	12	e.	H. F. Dyson.
St. Charles	Kane	700	12	61.8	− 2.4	89	13	36	27	33	3.59	− 1.11	1.35	0.0	8	17	8	5	se.	Dr. Wm. H. Bishop.
Springfield	Sangamon	644	28	65.2	− 1.2	90	13	39	27	28	3.67	+ 0.30	1.51	0.0	9	15	6	9	se.	U. S. Weather Bureau.
Staunton	Macoupin	625		68.4		96	13	35	28	39	4.81		2.02	0.0	5	14	13	3	nw.	William F. Schaefer.
Streator	La Salle	626	15	64.6	− 1.9	95	13	36	27	40	2.74	− 0.60	1.15	0.0	5	22	2	6	sw.	Edward F. Sweetser.
Sullivan	Moultrie	530	9	65.6	− 2.5	92	13	35	27	38	4.37		1.40	0.0	5	15	13	2	sw.	C. A. Corbin.
Sycamore	De Kalb	855	28	61.6	− 1.0	90	13	34	27	39	3.95	+ 0.51	1.43	0.0	5	16	5	9	se.	Miss E. J. Davis.
Tilden	Randolph	500	23	69.0	− 0.6	100	3	36	28	38	5.47	+ 2.22	1.75	0.0	9	20	7	3	nw.	James A. Caldwell.
Tiskilwa	Bureau	798	14	62.2	− 2.7	88	13	38	27	31	3.99	− 0.50	1.33	0.0	9	20	2	8	nw.	F. I. Smucker.
Walnut	do	717	17	64.0	− 2.7	90	12†	37	27	31	2.41	− 1.47	0.87	0.0	7	15	8	7	e.	O. C. Nussle.
White Hall	Green	573		65.0		92	13†	35	28	36	4.74		1.69	0.0	9	20	0	10	w.	Dr. R. A. Pritchett.
Windsor	Shelby	681	10	65.4	− 1.8	93	13	32	28	40	2.94	− 0.23	1.64	0.0	5	11	13	6	s.	Herbert Rose.
Winnebago	Winnebago	900	21	61.6	− 1.8	90	13	36	27	35	2.18	− 1.30	0.66	0.0	8	20	3	7	se.	Frank Osborn.
Yorkville	Kendall	584	21	62.0	− 1.2	92	13	32	27	40	3.32	− 0.24	1.50	0.0	10	15	10	5	w.	Herman A. Grimwood.
Zion	Carroll	938	13	61.6	− 1.8	88	12	33	27	44	1.05	− 2.23	0.90	0.0	2	21	3	6	w.	Robert F. Gillogly.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of fall not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
‖ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
| Estimated by observer.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 5, Upper Mississippi Valley.*

Stations.	River basins.	Day of month																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
North Dakota.																															
Amenia	Red													T.		.25				.06	.15	.04										0.60
Bottineau	Mouse				.05									.42	T.					.03			.03									0.53
Cando	Sheyenne												.53																			0.53
Crosley	Mouse											.11	.20	.20							.16	.02										0.69
Devils Lake	Sheyenne			.06									.95	.07	.06				T.			.01	T.									1.15
Donnybrook	Mouse			T.									T.	T.					T.		T.	.20	T.	T.								0.20
Dunseith	do												.27	.21							T.		T.									0.48
Edmore	Sheyenne																															
Forman	do		.22											.40						T.		.52										1.14
Grafton	Red													.75	.10						.19	.64										1.68
Granville	Mouse			.29								.06	.14	T.					.06			.01										0.56
Hamilton	Pembina																															
Hannah	do			T.									T.																			T.
Hansboro	Red												.36	.24								T.										0.60
Hillsboro	do													.45		.10			.48		.40	.03	.27									1.73
Lakota	Sheyenne			.11								T.	.02	.48		.57					.01		.12									1.31
Langdon	Pembina													.61																		0.61
Larimore	Red				.10							T.	.10																			0.20
Lisbon	Sheyenne		T.	.10												.29				.10			.13									0.62
McKinney	Mouse			T.									.10	T.					T.		T.	.06	T.									0.16
Manfred	Sheyenne		T.	T.									.22		.05				.05													0.32
Mayville	Red											T.							.25		.10		.15									0.50
Milnor	Sheyenne		.20												.30						.10	.50										1.10
Minot	Mouse				.30							.04		.10	T.					.05												0.49
Minto	Red			.02										.43	.02				.37		.18	.35										1.37
Oriska	Sheyenne											T.			.17				.09		.12	.02	.11	.04								0.55
Park River	Red																															
Pembina	do				T.									1.50	T.				T.	.16			T.									1.66
Portal	Mouse						.03																.05									0.08
Power	Sheyenne		.04										.61		.23				.51			.48		T.								1.87
Pratt	Mouse																															0.00
Towner	do																															
University	Red			.06	.01							.07		.12	.14				.17			.04	.06									0.67
Wahpeton	do																															
Walhalla	Pembina												T.	.61	.01		T.	T.					T.									0.62
Westhope	Mouse			.54								T.	.72	.03					.03		.02	.04										1.38
Willow City	do																															
Minnesota.																																
Albert Lea	Mississippi		.50	.05	T.			T.	T.		.20	.45	T.	.90									.75	T.								2.85
Alexandria‖	do			T.					.35				.20		.24					.25		.40	1.20									2.64
Angus	Red											.09		.78	.07	.15			.70	.10	.08		.61									2.58
Bagley	do			T.	T.									.33	.22					.62	.05	.40	.05									1.67
Baudette	Rainy			.11	.16						.15		2.00	.17						.76	.94	.30	.10									4.69
Beardsley	Minnesota		.28	T.									.20		.15				.14		.17	.42										1.36
Beaulieu	Red																															
Bird Island	Minnesota		.82	.22		T.		.01			.43	.33			.01					.43		.85	.08	T.								3.18
Caledonia‖	Mississippi		.69	.30	.51				.14		2.00	.62	.33	.26							T.		.16									5.01
Campbell‖	Red																															
Cass Lake‖	Mississippi			T.						T.			T.		.05	.35			.90		.03		.84									2.17
Collegeville	do		.07						.06	.04			.43			.01					.21	.75	.12	T.								1.69
Crookston‖	Red				.73							T.			.04	T.	.12			.28	.27	T.	.12									1.56
Detroit‖	do	T.		T.					.13				T.	T.	.05	.20			.46	T.	T.	.48										1.32
Fairmont	Minnesota		.70	T.	.04					T.		.07	1.31	T.	.33				.38		T.	1.00		T.								3.83
Faribault	Mississippi		.49	.08	.01				.15			.51	1.22	.29	.61					.10	.01	.73	.21	.11									4.52
Farmington	do		.35	.16	T.				.12	T.		T.	3.14	.86	.49					.06	T.	.61	.30									6.09
Fergus Falls	Red		.10	T.					.12	.01			T.		.25				.36		.04	.44		.07								1.39
Fort Ripley‖	Mississippi									T.	T.				T.					.40	T.	1.10	.34		.09								1.93
Fosston	Red													.50	.24				.27		.89	.51	.06										2.47
Glencoe	Mississippi		.48	.36				T.	T.			3.50	.08	.10							T.	.85	.42									5.79
Grand Meadow	do		.60	.12	T.			T.	.09		.14	2.07	.17	1.97							T.	T.	.23	T.								5.39
Hallock	Red				T.									.32	.07				.25		.13		.05									0.82
Halstad‖	do				T.									.07	.02	.13				.22	.17	.41	.32									1.34
Hinckley	St. Croix																															
International Falls	Rainy													1.39		.35			.48	.07	.55	.09										2.93
Kelliher	Red													.40	.04	.12			.88		T.	.54	.10									2.08
Lake Crystal	Minnesota		.53										.70		.45				.48			1.15										3.31
Leech Lake Dam	Mississippi													.30		.28				.68	.04	.71	.12									2.13
Litchfield	do			.25	.02				.10			1.00	.10									1.88	.10									3.45
Little Falls	do		T.						.02				T.	T.		.04				.51			.34		T.							0.91
Long Prairie	do																															
Lynd(2)	Minnesota																															
Mankato‖	Minnesota			.91									.83	.09	.28	.08				.50		.03	1.26									3.98
Milaca	Mississippi								.15	.16			.15	.33						.33			1.70	.04									2.86
Milan	Minnesota		.48	.02								.13	.29		.09				.17		.29	.38										1.85
Minneapolis(1)	Mississippi		.20	.08	T.				.03	.08		.30	.27	.19	.31				.37	.14	.03	.97	.01	T.								2.98
Minneapolis(2)	do		.20	.11	T.				.03	.08		.10	.48	.07	.38					.51	.04	.80	.08	.05									2.93
Montevideo‖	Minnesota		T.	.58					T.				.25			.06				.41		.81	.32		T.							2.43
Moorhead	Red													T.	.23				.24		.30	.64		.03								1.44
Mora	St. Croix								.16	.04	.01		.01	.42	.01					.42	.03	1.50	.47										3.07
Morris	Minnesota											.50			.18				12		.32	.90	T.	T.									2.02
New London	Mississippi	.16	.50				.06				.06	.11							.07	.10	1.20	.05										2.31
New Richland	Minnesota		.21	.07				T.	T.		T.	.78	T.	.61					.42	T.	.63	.17	T.									2.89
New Ulm‖	do		T.	1.20	.05	T.		T.	T.			.73	T.	.14	.05				.37		.44	.80		.15								3.93
Osakis	Mississippi		T.		T.			.08	.06		1.13				.16			T.	.50		1.05	.01		.03								3.02
Park Rapids‖	do								.03	T.				T.		.14	.01		.85		.01	.73						T.				1.77
Pine River Dam	do								.15							.20			.60	.20	1.20		.20									2.55
Pokegama Falls	do								.02					2.70	T.	.26			.66	.04	.83	.06										4.57
Red Lake	Red				.20									.80	.20		.06		.65	.56	.30											2.77
Red Wing	Mississippi		.25	T.	T.				.80	T.			2.75	2.20	.78				.10	T.	T.		T.									6.88
Red Wing (river)‖	do			.42	.04	T.			.38	.44	T.		2.98	1.82	.24	.52			.02			.48	.04	T.								7.38
Redwood Falls	Minnesota		.65	.38								.04	.26						.48		.46	.06										2.33
Reeds Landing‖	Mississippi			.58	.22	.06				.28			3.52	.06	1.24	.52			.04			T.	T.									6.52
Rochester‖	Mississippi			.72	T.			T.	T.	T.			.84	.14	.95	.43			.10			.12		.15								3.45
Roseau	Rainy													1.65					.79	.70	T.											3.14
St. Charles‖	Mississippi			.70					.03	.09	.02		1.43	.20	1.09	.46			.02													4.04
St. Cloud	do		.12	.01					.24	.10				.51					.32	.13	2.28	.35										4.06
St. Paul	do		.19	.15	T.				.04	.05		.13	.71	.30	.39				.68	.12	.05	1.21	.04									4.06
St. Peter	Minnesota		.58	.34					T.				1.08	.12	.33					.60	T.	.64	.15	T.								3.84
Sandy Lake Dam	Mississippi								.02					T.		.12				.36		1.25	.20									1.95
Shakopee	Minnesota																															
State Sanitorium	Mississippi												.03	.12	.15				1.28	T.	.69	.01										2.28
Stillwater‖	St. Croix			.38	.18					.24	T.		.70	1.70	.22	.40			.38	.08	.02	1.40		T.								5.70
Taylors Falls	do			.53					.38	.09			.42	.38	.48				.70	.05	.82	.64										4.49
Wabasha	Mississippi																															

TABLE 2.—*Daily precipitation for September, 1909. District No. 5*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Minnesota—Cont'd.																																	
Warroad	Rainy											.10		2.25	.09	.01	.03		.70		.94	T.	.03										4.15
West Concord	Mississippi		.42	.15	.01				.14			.04	1.03	.10	.90					40			.90									4.09
Willow River	St. Croix								T.	.02				1.00		.09	T.			60	.06	1.77	.44									3.98
Windom	Des Moines		.73	.04								T.	.45	T.	.18					25	T.	T.	.30	T.								1.95
Winnebago‖	Minnesota		.01	.67		T.			.03	T.			1.35	.11		.10				20		.02	1.46		T.							3.95
Winnibigoshish	Mississippi													.20		.31				83	.16	.85	.13									2.48
Winona	...do		.54	.22	.01				.04	.01	T.	T.	1.85	.20	1.55	.01				T.	T.		.02	.21								4.66
Worthington‖	Des Moines	T.	T.	.52	T.							T.	1.01	T.	.10	T.				21			.18									2.02
Zumbrota	Mississippi		.67	.15	.03				.10	.04			2.75	.02	.71					10			.43	.10								5.10
South Dakota.																																	
Milbank	Minnesota		.08	.71					T.	T.				T.		.16				13		.15	.32						T.			1.55
Wisconsin.																																	
Antigo	Wisconsin			T.					T.	.24	T.		.24	.70	.81	T.						T.	.02									2.01
Barron	Chippewa		T.	T.					.58	.08			.93	.82	.54					.07		.07	1.18									4.27
Beloit	Park		*	.74					.62				.58		.39						T.	.64	.12									3.09
Brodhead	...do	.22	.60	T.					T.	T.			.47	.25	.20							.48	.10									2.32
Burnett	...do		T.	.57	T.				*	.23			.26	T.	.48							*	.61	T.				T.				2.15
Delavan	...do		.77		.03				.01	.87			.04		.55	.03						1.13	.15					T.				3.58
Dodgeville	...do																																
Downing	Chippewa		T.	.55	T.				1.05	T.			.96	1.03	.60					10	T.	T.										4.29
Eau Claire	...do		.11	.28	T.				.60	.13		T.	.60	2.99	1.64		T.			34		T.	.06	.09								6.84
Ellsworth	Mississippi																																
Gliddon	Chippewa																																
Grand Rapids	Wisconsin			.18	T.				*	.04		T.	.71	1.16	.65	.20							.14	.07								3.15
Grantsburg	St. Croix								.38	.10												2.00	1.00	.45								3.93
Hancock	Wisconsin		T.	T.	T.				.35	T.			.70	1.10	1.10									.18								3.43
Hatfield	Black			.23						.09			1.07	.87	.84																	3.10
Hayward	St. Croix								.15	T.	T.			.12	.51					37	T.	.85	.25	T.								2.25
Hillsboro	Wisconsin		.73		T.				.20				.60		1.37									.21								3.11
Koepenick	Wisconsin			.22					.14				.30	.31	1.66	.05						.01	.03						.03			2.75
La Crosse	Mississippi		.86	.04	T.				.04	T.	.01	.12	1.82	.26	.74								.14									4.03
Lake Mills	Park		.07	.40	.02				T.	.04			.11	T.	.12	.08						.16	.52					T.				1.52
Lancaster	Mississippi	.42	.08						.05	.09			.59	.06	.91																	2.20
Long Lake	Wisconsin				T.					.11			.18	.11	1.70	.05	T.						.10	.14					.09	.02		2.50
Madison	Park		.70	.02					.05	.04			.54	.27	.33							.21	.04	T.	T.			T.				2.20
Mather‖	Wisconsin			.30						.23	T.		.56	1.14	.37	.62							.12		.16							3.50
Mauston	...do			.50	.05								.50	.45	1.23																	2.73
Meadow Valley	...do		T.	.60					T.	.14			1.70	.27	.88	.03						T.	.13	.02								3.77
Medford	Black			.15					.16	.10			.91	.85	1.37																	3.54
Merrill	Wisconsin			.15					.09	.08	T.		.49	.24	1.24	.02												.02	T.			2.33
Minocqua	...do								.10				T.	.97	2.00					T.		.20	.10									3.37
Mondovi	Mississippi		.18	.15	.01				1.70	.01			2.65	.08	1.86	.02				23			.09									6.98
Mt. Horeb	Park		.70						T.	.06			.60	.25	.60							.16	T.									2.37
Muscoda‖	Wisconsin			.90		T.				.08	T.		.06	.10	.90	.18							T.	T.	.18							2.40
Neillsville	Black			.16								1.49	.52		.40				.70				.06									3.33
New Richmond	St. Croix		.17	.34					.19	.05			1.00	1.00	.61					38	.03	.06	1.04									4.87
Osceola‖	...do		T.	.20					.10			.93	.32	T.	.45					70	.10	1.00	T.									3.80
Portage	Wisconsin		.42						.40				.40	1.65	.13							.23		.07								3.30
Prairie du Chien‖	Mississippi			.61		T.			T.	.14	.02		.04	.49	.73	.15							.08	T.	T.							2.26
Prentice	Chippewa				.06				.20	T.			.32		1.81					04		T.	.08									2.51
Rhinelander	Wisconsin									.20	.01		.30	.13	1.70	.27				03			.08	.09	.04				.02		.03	2.90
Sauk City	...do																																
Shullsburg	Mississippi		.55					.27					.47	.27	1.73							T.	.14									3.43
Solon Springs‖	St. Croix									T.				T.	.06					03	1.00		1.77									2.86
Spooner	...do				T.				.27	.10				.06	.58					46	.03	.65	.33									2.48
Stanley	Chippewa			.13					.43	.06			.87	1.03	1.34	.07				14				.07								4.14
Stephens Point	Wisconsin		T.	.10					.60				1.65	.09	1.20									.20				T.				3.84
Valley Junction	...do		.16	.53	T.					.29			1.31	.36	.96		T.						T.		.32							3.93
Viroqua	Mississippi		.42	.64	T.				.12	.03			.74	.35	.96	T.						T.	.12	.04	.02							3.44
Vudesare	Wisconsin	.06								T.						.27				T.	T.	T.	T.		T.			T.	.25	.05		0.63
Watertown‖	Park		*	.44	.05				T.	.52	.07		.56		.14							*	.76	.04	T.				T.			2.58
Waukesha (1)	Fox			.27		.03			.01	.77			.45	.08	.58							.17	.91						.05			3.32
Waukesha (2)	...do			.31					.02	.75			.30		.53							1.00	.16						.07			3.14
Wausau	Wisconsin			.08	.01				.22	.17			.62	.63	1.24	.02						T.	.02						T.			3.01
Weyerhaeuser	Chippewa			.02					.25	.03			.52	.22	.77						.03	.19	.20	T.								3.23
Whitehall	Mississippi		.13	.35	T.				T.	T.			1.10	1.15	.44					03				T.	T.							3.20
Iowa.																																	
Albia	Des Moines		T.	.82	.02		.10	.30		.61	.04			.48	.84	.25							.07	.10									3.63
Algona	...do		.23	.05									.47	1.88	.09	.93				30	T.	.60	.16	T.								4.71
Amana	Iowa		.53		T.				.08					T.	.70	2.65							T.	T.								3.96
Ames	Skunk		.16	T.	.03		.08			T.		.15	.22	1.00	1.00					T.	T.		.18	T.								2.82
Baxter	...do		.34	.01	T.		.07		T.	T.			.01	.53	1.14							.05	.05	T.								2.20
Belle Plaine	Iowa		.52	T.			T.		.02	.08			.11	.02	1.06							T.	.03									1.84
Bloomfield	Mississippi		.70		.08		.42		.48	.02					1.54								.31									3.55
Bonaparte	Des Moines		.80		.03		.20		.22	.03					1.59							.21	.18									3.26
Boone	...do		T.	.35	T.		.06	.20		T.	.13		.19	1.24	1.26	.08				02	T.	.02	.65	T.	.04							4.24
Britt	Iowa	T.	.17	.05	T.				.03			.33	1.16	.07	.95					08	T.		.68	.18								3.70
Buckingham	Cedar		.36											1.05	.50							.05		.10								2.06
Burlington	Mississippi			.78	T.	.01	.03	.10	.08	.20	T.				1.91	.73						T.	.44	.19								4.47
Carroll	Raccoon		.30			.22	.26						.66	1.59	.73	.10				.12		1.25										5.23
Cedar Rapids	Cedar		.50	T.	T.				T.	T.			T.	.09	2.56	.76							T.	T.	T.							3.91
Charles City	...do		.55	.03					.04				.14	.33	.30	1.64					T.	.08	T.	.01								3.12
Clear Lake	...do		.33							.40	.60	.40			.18	1.20							1.40	.03								4.54
Clinton	Mississippi		.50						.22	.02			.08	.30	.60							.25	.30	T.								2.27
Columbus Jct.	Iowa		.78		T.		T.	.05	.19	.01				T.	1.16							T.	.20									2.39
Davenport	Mississippi		.27		T.		T.		.03	T.			.04	.07	.69						T.	.25	.15									1.50
Decorah	...do			.62					.07			.05	1.08	.65	.70																	3.17
Delaware	...do		.56	.03					T.	.07			.52	.35	1.18								.15									2.86
Des Moines	Des Moines		.56		T.		.35		T.	.02		T.	.16	.35	.34					T.	T.	.22	.03	.03									2.06
De Soto	Raccoon		.55		.02		.45		T.	.01		T.	.05	1.39	.52						T.		.40									3.39
Dows	Iowa		.11	.08								.43	.25	.85	1.43						.43											3.58
Dubuque	Mississippi		.35		T.				.21	.03		T.	.15	3.02	.45						T.	.01	.01	.05								4.28
Earlham	Raccoon		.57		.11		.47			T.		T.	.12	2.17	.45								.44									4.33
Elkader	Mississippi		.57						.08				.25		1.25							T.										2.15
Elma	Wapsipinicon		.54	.50	T.				.02	.02		.35	.35	.42	.33					T.	T.		.05	.50									3.08
Estherville	Des Moines		T.	.38	T.	T.			T.			.15	2.20		.20	.12				34		.20	1.10									4.69
Fairfield	Skunk		.02				.14	.02	.29	.01				.01	1.40						.07		.21									2.17
Fayette	Mississippi		.80	.04					.10			T.	.03	.60	1.13							.04	T.	.03								2.77
Forest City	Cedar			.55	T.				T.				2.07	.06	.85	.07				T.												3.60
Fort Dodge	Des Moines		T.	.16			T.	T.	T.	T.			.73	1.27	1.05					06			.46									3.73
Ft. Madison	Mississippi		.36				.18		.25	T.				1.15	1.82							T.	.48									4.24
Gilman	Iowa		.38		T.				.08	T.		T.	.20	.22	.44							T.		.07								1.39
Grand Meadow	Mississippi		.54	.10					.10	T.		.02	.22	.55	1.02	.02						.03	.05	.03								2.68
Greene	Cedar		.51	.10					.05	.02		.13	.30	.96	1.40								.05	.17								3.69

TABLE 2.—*Daily precipitation for September, 1909. District No. 5*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Iowa—Cont'd.																																	
Grinnell	Iowa		.64				.05		.06	.10		T.	.05	.14	.70						.05		.07										1.86
Grundy Center	Cedar		.25	.07	T.				.05	T.			T.	2.20	.90								.10	.05	.25								3.87
Guthrie Center	Raccoon		.45	.03			.35	.01		.01		.08	.33	1.25	1.36					T.	T.		.42	.04									4.33
Hampton	Cedar		.23	.03					.05			1.40	.13	.97	1.35							10											4.26
Humboldt	Des Moines		.22	.06						.01		1.10	.52	.80	1.05					.10			.36										4.22
Independence	Wapsipinicon		.23	.04					.18				.07	.55	1.35								.02										2.44
Indianola	Des Moines		.68		.02		.47	T.	.01				.01	.43	.99								.13										2.74
Iowa City	Iowa			.56						.09				.03	1.35	.24						12	T.	.04								2.43
Iowa Falls	...do			.24	T.	T.		T.		T.	T.		.26	1.27	.62	.22					T.	.02	T.	T.	T.							2.63
Jefferson	Raccoon		.25	T.	T.	.25	.25			T.			.57	.72	1.72																	
Keokuk	Mississippi		.43		.08		.21		.25	.02				1.29	.79							25	.14										3.46
Keosauqua	Des Moines			.55	T.	.06	.03	.26	.02	.65	.02				.71	.33						40	.06	.05									3.14
Knoxville	...do		1.05		T.		.38		.30			T.	.18	.18	.81								.06										2.96
Lacona	...do		.60		.10		.66		.58					.15	1.00								.12										3.21
Le Claire	Mississippi	.03		.37		T.		T.	.17	.05			T.	.24	.49							T.	.36	.32									2.03
Marshalltown	Iowa																																
Mason City	Cedar		.37	.09								.28	.72	.20	1.70					.06		.01	.32										3.75
Mt. Pleasant	Skunk		.53		T.		.12		.52	.01				T.	.94						.01	T.	.14										2.27
Muscatine	Mississippi			.48			.02	T.	.04	.06				.01	.66	.34							.10	.25									1.96
New Hampton	Wapsipinicon		.59	.10	T.				.05	.02		.11	.60		.91									T.									2.38
Newton	Skunk		.65		T.		.11		T.				.18	.19	.70								.10										1.93
Northwood	Cedar		.42	.03					.06	.02		.24	1.00	.08	1.23								.95	.06									4.09
Olin	Wapsipinicon		.04	.06	.08										20	1.80					.06												2.24
Osage	Cedar		.57	.01								.30	.82	.15	1.35								T.	T.									3.20
Oskaloosa	Des Moines		.78		.03		.25		.42				.70	.93	.47							T.	.03										3.73
Pella	...do		.55				.20		.10				.16	.10	.56								.03		T.								1.70
Perry	Raccoon		.23		.05		.33	.04	.03			T.	.64	1.34	1.50					.03			.84	T.									5.03
Plover	Des Moines		.12									.60	.88	.20	.42					.10			.75										3.07
Pocahontas	...do		.20									.68	.52	.40	.46					.28	T.	.41	.12	T.									3.07
Ridgeway	Mississippi		.50	.09					.11	.03		.12	1.05	.20	1.59							.01		.04									3.74
Rockwell City	Raccoon		.30		T.		.05			T.		.50	.50	1.75	1.35					.45		.80											5.70
Sac City	...do		.24	.01			.11					.32	.28	.62	.57					.07	.05	.33	.04	.09									2.73
St. Charles	Des Moines		.50		.06		.58		T.					.37	.58								.20	T.									2.29
Sigourney	Skunk		.82		T.		.16		.73	T.			.06	T.	2.22								.04										4.03
Stockport	...do		.75	.19	.03		.07		.75	.05				T.	1.09						.13	T.	.07										3.13
Storm Lake	Raccoon		.28		T.	T.		.05				.66	.24	.10	.30						.04	.47		.02									2.16
Tipton	Cedar		.41							T.	T.			T.	1.04								.06										1.51
Toledo	Iowa		.45										.10	.55	.70							08											
Wapello	Iowa		.29						.30	.07				.66	.78							10	.13										2.33
Washington	Skunk		.67				.02		.12				.15	.03	2.35						.15		.18										3.67
Waterloo	Cedar		.46	T.					.03	.05		.05	.13	.94	.33							T.	.02	T.	.07								2.08
Waukee	Raccoon		.44	T.	.02	.30			.02	T.		.02	.30	1.07	.45								.27	.06									2.95
Waverly	Cedar		.44	.04	.02				.05	.01		.17	.17	.85	.81									.04									2.60
Webster City	Des Moines		.15						T.			.31	.26	1.07	1.24					T.			.84										3.87
West Bend	...do		.18	.05	T.					T.		.58	1.17	.13	.67					.11	.03	.60	.20	T.									3.72
Whitten	Iowa		.32	T.	T.		T.		T.	T.		T.	T.	1.80	.62						T.		T.	T.									2.74
Wilton Junction	Cedar		.42											.56	.50																		1.48
Winterset	Des Moines		.75		.02	T.	.45		T.	.03		T.	.05	.62	.40					T.	T.		.42										2.74
Zearing	Iowa	.21		.05									.10	2.05	1.07																		3.48
Missouri.																																	
Darksville	Chariton																																
Gorin	Mississippi		.28		.14		.24		.28	.02			.17		1.16								20										2.49
Hannibal	...do		.15	.12	.24		.36	.19	.17	.45					1.28							53	.03										3.52
Louisiana	...do		T.	.04	.25		.15	.55	.23	.81					3.30	.10						92	.07										6.42
Mexico	...do		*	.02	.29	T.	*	2.42	.04	.18	T.			*	.30	.04						*	.31	.03									3.63
Steffenville	Mississippi		T.	.21		.35	.25	.24	.50						1.48							05	.66										3.74
Sublett	Chariton					.10		.50	.85	T.	.55				1.10						T.												3.10
Warrenton	Mississippi																																
Indiana.																																	
Collegeville	Iriquois			1.05					T.	.90					.50						.10	.37	1.09	.25									4.26
Knox	Kankakee			.75	.02					.12					.48							12	1.34	.53					.05	T.			3.41
Laporte	...do									.05					.60								1.35	.23					.01	T.			2.24
Plymouth	...do			.37	T.					.17					.97						.20	T.	1.08	.70	T.				T.		T.		3.49
Illinois.																																	
Aledo	Mississippi		.48				.04	T.	.13	.01				1.66							.09	.28	.35										3.04
Alexander	Illinois		.01	.13	.05		.06	.02	.21	.14				1.29	.56						1.16	.26											3.89
Antioch	...do			.60					T.	.52				1.00							T.	1.50											3.62
Ashton	Mississippi		.10	.31	T.				.19	.02		T.	.22	.05						.26	.81												1.96
Astoria	Illinois		.20	.50	.08		.05	T.	.20	.10				.80	.25						1.10	.75											4.03
Aurora	...do			.99	T.				T.	.13				T.	.34					T.	T.	1.19	.63										3.28
Beardstown	...do																																
Bement	Mississippi		.71					.11							.39						.90	.75	.50										3.36
Benton	...do							.95	T.		1.47				.30						2.00	.25	.65										5.62
Bloomington	Illinois		.14						.14	T.				.16	.37						.96	.58											2.35
Cairo	Mississippi		.01	.08	.80	.01		1.25	.46	.66	.01			T.	.13						1.44	.81											5.66
Cambridge	...do																																
Carlinville	Illinois		T.	.17	.04		.04	.15	.03	1.09				.55	.21						1.41	.66	.41										4.76
Carlyle	Mississippi							.90		.95				.70							1.40	.30											4.25
Chester	...do			.01	T.	.32		2.90	.14	.46	.90				1.02						T.	2.02	1.01										8.78
Chicago	Illinois																																
Coatsburg	Mississippi		T.	T.	.14		.20	.06	.48	.20				2.33							.46	1.03											4.90
Cobden	...do			T.	T.	T.		3.15	.18		2.12				T.						2.97		.75										9.17
Colchester	Illinois																																
Dakota	...do		.19	.52					.05	.37			.15		.29						.01	.18	.43		.04								2.23
Decatur	...do		.15	.50	T.		.03		T.	.22					.81							1.08											2.79
Dixon	Mississippi		.51	T.					.50	.15					.35							1.10	.20										2.81
Du Quoin	...do		T.	.06	.02	.06	T.	.90		.80					.37							1.92	1.58										5.71
Dwight	Illinois		.04	.35	T.	T.			.04						.51	.15					T.	.45	.64	.16									2.34
Galva	...do		.47	.02		.02	T.		.12	.05					.89	.02						.81	.44	.01									2.85
Grafton	Mississippi			.14	.12			.82		.12						.93							1.90	.14									4.17
Greenville	...do		.02	.05	T.		.05	.52		2.30					.08	1.40						1.30	.49										6.24
Griggsville	Illinois		T.	.19	.12	.18		.23	T.	.29					1.86							1.49	.28										4.67
Halfway	Mississippi			.11	T.	.06		.83	.04		.93					.05						1.83		.83									4.68
Havana	Illinois		.20	1.08	.05		.03		.10	.08				2.12								1.42	.60										5.68
Henry	...do		.22	.20	.02	T.			.30	.08					.94	.60						.58	.99										3.93
Hillsboro	Mississippi			.15		T.		.15		2.80	.62					.80							1.45	.48									6.45
Joliet	Illinois		.22	.72	T.		T.		.08						1.09	.02					.03	.55	.38										3.09
Kishwaukee	Mississippi		.19	.40					.03	.19			.23		1.20						.09	.26	1.00										3.59
Knoxville	Illinois		.42											.75	1.25							.77	.44										3.63
La Grange	...do	1.10	T.						T.	T.					.46	.06					T.	.47	1.17					T.					3.26
La Harpe	...do	.86		T.		.08		.56	T.					2.62								.20	.36										4.68
Lanark	Mississippi	.10	.30	T.				.12	.27			T.			.60							.21	.21										1.81
La Salle	Illinois	.38	.13	.02				.04	T.					1.35						T.	.86	.37											3.15
Lincoln	...do																																

TABLE 2.—*Daily precipitation for September, 1909. District No. 5*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Illinois—Cont'd.																																	
Loami	Illinois		T.	.25	T.		.04		.05	.25					1.04							.92	.27										2.82
Martinton	do		.85							.87											T.	1.55	.55									3.82
Mascoutah	Mississippi			.21			.62	.07		.52					.23	.69						1.71	.20									4.16
Minonk	Illinois		.50		T.				.18	T.					T.							.73	.57									1.98
Monmouth	Mississippi																																
Morrison	do		.06	.42	T.	T.			.55	.02	T.			T.	.69							.22	.64		T.							2.60
Morrisonville	Illinois		T.	.46	.03		T.	.01		.35						.69						.88	.05	.92								3.39
Mt. Vernon	Mississippi			.21				.40	.05		.76					.12						T.	1.92	.26								3.72
Oregon	do		.10	.49	T.				.20	.30					.30						T.	.25	1.15									2.79
Ottawa	Illinois			.74					.03						1.08	.47						.25	1.38	.13								4.08
Pana	Mississippi		T.	.64	T.		.02		T.	.35						.38						1.16	.99	.19								3.73
Peoria	Illinois		.44	.07	.01		.01		.33	.01					1.25							1.19	.37									3.68
Pontiac	do		.07	.23	T.				.08						.12	.20						.30	.84	.31								2.15
Riley	Mississippi		.08	.58	T.	.01			.05	.05					1.15	.05						.12	1.25	.03								3.37
Rockford	do			.73		T.				.72	.03			.34		.84						T.	.60	.15	T.				T.			3.41
Rushville	Illinois		T.	.71			.21			.17					1.45							1.30	.15									3.99
St. Charles	do		T.	.83					T.	.12					.36	.11					.31	.12	1.35	.39					T.			3.59
Springfield	Illinois		.12	.29	.03		.03		.07	.18					1.51							1.16	.28									3.67
Staunton	Mississippi		T.				.87	T.	T.	.54												.40	.98	2.02								4.81
Streator	Illinois			.40	T.					.20						.51							1.15	.48								2.74
Sullivan	Mississippi		T.	1.10			T.		T.	.61						.61						1.40		.65								4.37
Sycamore	do			.70						.27						1.43							1.15	.40								3.95
Tilden	do		T.	.04		T.		1.15	.31	.62	.14					1.15						1.75	.25	.06								5.47
Tiskilwa	Illinois		.15	.28	T.	.01	T.		.30	.74					.54	.24						.40	1.33									3.99
Walnut	Mississippi		.16	.25					.21	.02					.57							.36	.84									2.41
Warsaw	do		.37				.35		.36					2.50	.36						.21		.20									4.35
White Hall	Illinois		T.	T.	.39		.13	.20	.14	1.11					.88	.12						1.69	.08									4.74
Windsor	Mississippi		T.							.50						.45						1.64	.20	.15								2.94
Winnebago	do		.06	.60					.10	.66			.13		.63							.37	.63									2.18
Yorkville	Illinois		.05	.75					.10	.05					.40	.05					.02	.10	1.50	.30								3.32
Zion	Mississippi														.90							.15										1.05

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 5, Upper Mississippi Valley.*

Date.	North Dakota.										Minnesota.																	
	Bottineau.§§		Devils Lake.		Lisbon.§§		Minot.§§		Pembina.§§		Collegeville.		Crookston.§§		Grand Meadow.		Montevideo.§§		Moorhead.		New Ulm.§§		Pine River Dam.		St. Paul.		Winnibigoshish.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	79	40	72	45	73	32	80	44	72	38	64	37	68	42	68	37	65	39	69	42	68	43	77	36	67	42	66	38
2...	83	44	73	50	60	45	79	53	71	42	64	45	68	47	60	42	56	44	68	46	58	44	66	44	63	46	67	45
3...	79	48	80	49	79	49	81	57	74	48	66	50	81	49	59	52	69	51	79	48	60	51	67	53	61	53	74	47
4...	65	38	64	43	68	47	81	41	72	40	67	54	62	47	67	54	69	55	65	45	69	52	66	32	67	51	68	52
5...	78	37	73	45	71	31	79	41	71	37	67	42	70	37	69	38	71	37	70	36	70	40	68	54	67	44	67	39
6...	74	41	69	42	76	44	70	42	70	38	74	48	65	45	68	50	88	44	70	43	71	45	70	48	71	50	69	52
7...	83	45	78	48	79	41	84	43	82	40	75	43	76	46	77	46	78	52	78	40	76	48	77	36	75	52	74	41
8...	82	47	77	54	75	43	84	55	82	50	71	56	78	50	64	52	76	50	75	56	71	49	74	51	64	60	78	54
9...	82	53	86	53	79	56	85	58	86	52	75	56	81	55	80	59	83	61	82	58	80	60	71	55	74	60	70	57
10...	79	44	77	48	84	45	83	44	81	40	76	57	75	47	85	54	88	57	80	52	87	56	76	50	84	56	78	53
11...	87	52	87	59	87	56	89	46	83	52	78	57	85	55	75	58	85	58	88	65	82	57	77	53	78	63	73	52
12...	64	55	75	57	90	63	59	55	76	59	79	61	83	64	77	61	83	63	88	66	81	63	79	60	78	63	77	60
13...	67	52	63	51	73	55	70	52	63	51	76	57	70	60	74	50	84	60	72	51	72	62	78	61	70	62	70	61
14...	65	42	61	43	77	32	67	42	58	40	69	50	67	43	61	49	72	53	73	43	64	57	76	56	62	54	65	48
15...	75	35	69	42	72	32	80	36	61	39	68	40	65	36	68	44	75	41	71	36	70	42	66	45	67	44	68	44
16...	70	40	69	45	75	38	77	45	63	48	76	50	67	45	75	47	82	42	72	48	80	42	68	52	77	53	72	53
17...	78	44	74	44	79	36	86	41	71	46	71	46	72	45	79	46	78	45	75	40	79	48	62	48	72	54	67	43
18...	63	45	70	47	84	47	70	47	71	50	76	51	81	50	78	54	86	48	84	55	83	49	77	52	78	54	76	48
19...	70	32	72	45	76	38	74	44	63	50	73	48	70	45	77	60	74	44	72	42	74	53	74	54	73	58	70	50
20...	68	40	69	48	85	48	71	38	70	42	77	53	68	53	81	57	81	50	78	52	80	54	76	50	79	57	74	50
21...	60	30	62	43	61	50	60	40	60	48	74	50	57	50	76	61	69	57	60	50	82	56	70	52	81	55	70	51
22...	61	30	60	40	64	45	65	36	51	38	61	44	57	44	67	50	63	46	60	44	62	49	58	48	59	47	55	49
23...	58	26	57	31	64	32	63	34	54	34	58	39	57	41	66	37	66	38	60	38	62	38	60	33	62	42	56	39
24...	74	30	68	37	75	28	75	37	51	33	66	39	61	38	68	39	72	39	66	37	68	41	56	36	63	42	64	32
25...	78	45	74	45	77	31	83	40	62	38	66	42	70	45	71	39	72	42	72	44	73	40	63	38	66	42	65	38
26...	80	46	77	51	78	37	85	41	70	39	67	40	70	47	65	37	70	44	71	49	68	41	65	35	62	43	65	40
27...	87	47	84	51	84	47	90	50	74	42	70	42	75	50	66	35	80	43	80	48	72	41	66	46	66	42	70	42
28...	79	46	75	45	78	48	80	45	77	41	74	52	70	48	75	49	79	45	72	50	77	41	72	44	74	54	72	48
29...	61	44	59	40	70	44	72	38	71	44	73	47	65	40	67	50	74	45	65	44	69	50	65	48	65	52	67	50
30...	74	42	71	38	76	33	80	38	74	34	68	43	69	42	75	41	72	40	72	43	72	40	68	31	69	45	69	36
31...																												
Mns	73.4	42.0	71.5	46.0	75.6	42.4	76.7	44.1	69.4	43.1	70.6	48.0	70.1	46.7	71.3	48.3	75.3	47.8	72.9	47.0	72.7	48.4	69.6	46.7	69.8	51.3	69.2	47.1

Date.	Wisconsin.														Iowa.													
	Delavan.		Eau Claire.		La Crosse.		Madison.		Mauston.		Spooner.		Wausaw.		Algona.		Cedar Rapids.§§		Charles City.		Davenport.		Des Moines.		Dubuque.		Keokuk.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	66	37	71	36	68	40	64	44	65	32	65	31	65	33	63	42	65	45	62	40	65	46	63	51	66	44	75	52
2...	70	36	67	37	66	43	64	46	66	38	67	32	72	37	57	49	58	46	55	46	60	49	61	54	61	47	65	54
3...	66	48	60	52	66	54	62	53	60	52	71	50	59	53	63	55	70	52	62	54	71	58	67	59	66	56	82	58
4...	78	58	68	53	66	52	70	55	68	57	66	51	64	54	67	53	70	57	67	50	71	57	70	54	71	54	70	60
5...	69	43	70	39	67	44	65	49	67	38	66	31	65	38	70	39	69	48	67	40	69	51	68	47	68	49	71	54
6...	79	45	72	45	69	49	69	49	68	46	72	35	72	44	72	53	66	48	68	50	68	57	59	56	70	53	64	56
7...	72	53	75	48	74	52	70	55	72	48	73	40	71	45	70	45	76	51	73	45	76	54	69	56	75	49	69	56
8...	71	51	68	56	66	57	68	54	68	51	69	51	74	52	70	59	67	52	66	60	67	60	69	61	64	60	72	61
9...	76	60	71	59	72	60	70	59	68	58	66	58	62	57	80	61	80	61	77	61	80	65	79	65	77	62	84	66
10...	81	57	84	56	83	59	80	57	80	55	73	53	79	58	85	53	84	59	84	54	83	60	85	61	81	57	86	65
11...	80	58	77	61	76	59	76	60	74	60	75	56	72	58	78	63	83	59	75	60	84	63	86	64	79	60	85	64
12...	85	61	77	67	79	64	74	63	74	61	77	63	73	54	78	63	88	63	79	66	88	66	89	68	83	67	91	67
13...	88	66	76	65	81	64	84	66	81	66	72	61	79	64	76	62	88	68	75	63	91	69	84	68	87	66	93	70
14...	83	66	68	58	64	56	76	58	78	60	62	54	73	56	64	53	72	66	63	52	73	57	69	55	73	59	84	65
15...	68	51	67	47	68	52	63	55	64	50	67	47	64	52	67	41	68	53	66	46	69	53	70	49	66	51	70	54
16...	72	41	76	46	76	48	69	49	70	41	72	45	69	43	75	41	75	47	76	46	73	48	79	49	73	47	75	49
17...	78	47	73	50	72	50	75	53	69	50	69	43	66	52	78	50	81	48	78	48	81	56	81	54	79	53	81	55
18...	74	53	77	51	79	50	75	53	76	46	75	48	74	48	80	55	82	52	79	57	82	59	86	58	79	57	84	60
19...	81	55	75	51	78	61	79	56	78	68	69	54	72	57	72	56	84	59	77	61	84	62	82	63	82	63	83	60
20...	85	57	73	52	83	58	83	59	81	51	75	44	81	52	80	59	86	59	84	58	86	62	86	60	84	61	86	65
21...	73	63	79	67	76	63	75	62	76	64	71	58	76	65	81	55	76	60	76	57	74	63	78	53	75	63	78	65
22...	72	54	71	54	69	51	64	52	70	56	62	43	71	57	62	49	66	56	64	44	64	50	66	53	66	51	65	56
23...	65	48	63	41	68	42	63	48	67	41	56	37	62	39	66	39	69	43	67	38	67	44	69	42	67	44	69	45
24...	65	41	65	39	64	42	62	45	62	35	62	34	61	35	69	41	71	43	67	39	67	44	72	41	65	44	69	45
25...	66	36	66	35	66	39	61	44	62	32	61	32	61	34	70	45	67	43	68	37	67	46	72	45	65	40	70	44
26...	60	35	64	35	62	38	58	43	59	30	61	33	60	33	64	41	64	41	62	37	62	42	65	44	62	41	62	44
27...	64	33	66	34	64	37	61	43	63	31	65	35	65	30	66	38	66	38	65	36	64	40	68	41	64	36	65	42
28...	72	40	74	44	74	48	74	47	71	43	71	43	68	44	76	55	80	38	75	47	77	47	80	46	79	47	74	45
29...	61	44	65	49	63	47	59	49	67	50	62	47	61	45	68	47	68	48	66	43	68	47	73	51	65	50	75	50
30...	66	36	71	38	66	41	64	47	66	38	63	33	64	38	68	41	72	42	68	38	69	42	71	43	67	42	70	46
31...																												
Mns	72.9	49.1	71.0	48.8	70.6	50.7	69.2	52.4	69.7	48.3	67.8	44.7	68.5	47.6	71.2	50.1	73.7	51.5	70.4	49.1	73.3	53.9	73.9	53.7	72.0	52.4	75.6	55.8

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 5*—Continued.

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois.													
					Cairo.		Greenville.		La Salle.		Mt. Vernon.		Peoria.		Springfield.		Winnebago.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	70	59	65	43	76	62	72	56	68	44	.....	.....	70	47	70	54	68	39
2	67	58	75	40	83	58	74	52	69	40	.....	.....	69	48	70	48	70	38
3	86	63	71	52	90	70	92	59	76	56	.....	.....	81	58	85	57	70	42
4	74	60	73	60	83	71	83	62	70	61	.....	.....	71	59	74	61	72	50
5	73	56	71	51	77	62	76	60	71	52	.....	.....	72	52	71	56	69	45
6	64	57	75	45	81	57	69	56	70	53	.....	.....	69	54	64	53	72	48
7	65	57	83	48	69	60	70	57	77	50	.....	.....	78	58	72	66	75	49
8	72	64	87	52	80	66	78	64	70	56	.....	.....	68	62	74	62	68	62
9	84	68	75	61	89	68	89	67	82	64	.....	.....	80	63	79	69	78	60
10	86	66	76	60	85	68	86	65	82	62	.....	.....	83	61	84	66	81	56
11	86	66	89	56	86	69	86	62	84	59	.....	.....	85	59	85	60	83	58
12	92	68	87	54	89	68	89	65	89	63	.....	.....	91	65	89	63	86	60
13	92	73	91	62	88	73	90	66	91	67	.....	.....	92	67	90	67	90	66
14	81	61	86	66	85	71	86	66	86	63	.....	.....	88	62	89	63	82	62
15	72	51	74	54	75	65	77	57	69	53	.....	.....	72	50	73	56	67	53
16	76	45	75	48	75	58	76	52	73	47	.....	.....	73	43	74	51	73	43
17	80	52	82	48	79	58	81	54	81	54	.....	.....	81	50	79	54	81	49
18	84	61	79	52	83	60	85	59	82	55	.....	.....	84	59	82	58	79	53
19	82	57	81	57	88	62	86	59	84	55	.....	.....	83	60	83	58	83	55
20	86	65	83	50	82	69	85	65	86	64	.....	.....	87	64	84	64	88	57
21	73	63	73	61	74	62	72	63	72	63	.....	.....	72	63	70	64	73	63
22	66	54	77	59	85	61	82	60	66	54	.....	.....	68	53	73	55	67	57
23	69	44	61	46	69	56	68	53	66	47	.....	.....	66	45	66	49	65	44
24	68	43	63	42	71	50	72	50	66	46	.....	.....	68	43	68	48	67	42
25	70	41	64	39	68	52	72	48	66	43	.....	.....	68	40	69	45	67	41
26	63	46	59	38	64	50	65	43	61	41	.....	.....	63	42	62	43	62	37
27	64	36	58	36	62	45	65	38	64	39	.....	.....	63	35	62	39	66	36
28	73	40	63	38	69	45	68	42	72	44	.....	.....	71	40	70	42	75	40
29	77	49	60	48	77	49	77	40	66	47	.....	.....	71	43	75	50	66	40
30	69	46	63	43	72	55	71	48	66	41	.....	.....	68	38	68	47	65	40
31																		
Mns	75.5	55.6	74.0	50.3	78.5	60.7	78.1	56.3	74.2	52.8	.....	.....	75.2	52.8	75.1	55.3	73.6	49.5

Climatological Data for September, 1909.

DISTRICT No. 6, MISSOURI VALLEY.

J. WARREN SMITH, District Editor.

GENERAL CLIMATOLOGICAL CONDITIONS.

The month of September was warmer than usual in the northern part of the Missouri Valley and slightly cooler than usual in the southern part. There was more rainfall than the normal, except in most of North Dakota, South Dakota, and extreme southern Missouri. The rainfall was excessive in parts of Colorado, Nebraska, Iowa, Kansas, and Missouri. The heaviest rainfall reported during the month was 12.04 inches at Lexington, Lafayette County, Mo., although at Lawrence, Kans., the monthly fall was 11.49 inches and at Topeka, Kans., 11.48 inches. The heaviest fall in any twenty-four hours was 8.08 inches at Topeka, Kans., on the 6–7th. The fall at Lawrence, Kans., on the 6–7th, was 7.49 inches.

Temperatures of 90° or over were recorded in every State in this district, while it was over 100° in Nebraska, Kansas, and Missouri. Freezing temperatures were recorded in every State, and in the mountain districts the temperature was below 15°, but, except in the mountain sections, there was a marked absence of damaging frosts during the month.

Snow fell in measurable amounts in the mountains in Montana, Wyoming, and Colorado, while a trace was recorded at a number of places in South Dakota. The heaviest snowfall reported was 17.5 inches at Corona, Grand County, Colo., at an elevation of 11,660 feet above sea level. The prevailing winds were from the west in Montana and Wyoming, from the south in Kansas and Missouri, and from the southeast in the other States.

In Montana the month was warmer than usual, while the precipitation was more than double the normal fall for September over most of the State, and the average for the State was greater than for any other September in the past fifteen years. Temperatures above 90° were recorded on one or more days at most stations in the eastern half of the State, and above 80° in most of the mountain districts. There were several days with temperatures near or below the freezing point over most of the State, but killing frosts occurred only in limited localities. The precipitation was invariably heaviest in the mountains of the upper portions of the drainage basins, and as a rule decreased with fair uniformity over the lower elevations and plains. The rainfall was less than 1 inch in the Milk River and lower Yellowstone drainage basins. The average amounts of precipitation over the various subdrainage basins were approximately as follows: Marias, 1.60 inches; Milk River, 0.68 inch; Sun River, 2.59 inches; Beaverhead, 2.81 inches; Madison, 3.20 inches; Gallatin, 4.26 inches; Yellowstone, 2.36 inches; Big Horn, 0.92 inch; Tongue River, 1.56 inches; Powder River, 1.66 inches; Little Missouri, 1.56 inches. Over the area drained by small tributaries directly into the Missouri the average was 2.94 inches. In the higher mountain districts and in some valleys snow fell to the depth of several inches during the storm that prevailed from the 19th to the 21st. The greatest amount reported was 15.5 inches at Jones Canyon, Gallatin County, at an elevation of 6,800 feet above sea level. Severe local rain and hailstorms occurred in the Gallatin and upper Yellowstone valleys on the 2d and 3d. The highest temperature reported was 99° and the lowest 14°. The heaviest rainfall was 5.81 inches, and the greatest amount in any twenty-four consecutive hours was 3.32 inches.

The weather throughout the State of North Dakota was warm and dry and very favorable for outdoor work. The sunshine was above the average. The absence of killing frosts was unusual. The temperature averaged nearly 2° a day above the normal, principally due to high night temperatures. The highest temperature was 92° and the lowest 28°. Light to killing frosts were reported from various stations on the 23d and 24th. The precipitation was fairly well distributed geographically. The heaviest rainfall was 2.04 inches and the greatest amount in any twenty-four hours was 1.32 inches. Light scattered showers occurred from the 2d to the 4th inclusive. Heavy showers were general from the 11th to the 14th, inclusive, and from the 18th to the 22d, inclusive. The remaining days of the month were generally fair.

The weather in South Dakota was, on the whole, favorable and unusually pleasant for the season, and the month closed with the larger part of the central and eastern portions of the State still free from frost. Killing frosts occurred in places about or after the 15th, but were mostly confined to the Cheyenne River Valley and parts of the Black Hills district. The frosts appeared to have caused little or no damage. The temperature averaged above the normal, except over the lower portions of the James and Big Sioux river valleys, and the White River Valley. The highest temperature reported was 97° and the lowest 25°. Temperatures slightly below 32° were recorded at 15 stations, mostly west of the Missouri River. General rains occurred from the 1st to the 4th and on the 21st. There were 9 days in the month on which either no precipitation fell, or none in excess of a trace was recorded at any station. The greatest monthly rainfall was 5.85 inches, and the greatest amount in any twenty-four hours was 3.79 inches. There was more than the normal amount of rain over the Black Hills district, the upper Missouri Valley counties, and the extreme lower portions of the James and Big Sioux river valleys. There was some snow, which melted as it fell, at high altitudes in the Black Hills district, on the 21st and 22d. There was about the normal amount of sunshine.

In Wyoming the temperature for the month averaged very close to the normal. During the first half, and after the 24th day the day temperatures were quite high. The highest temperature recorded was 90°. The lowest temperature was 9° at Tower Falls, Y. N. P., on the 22d. Killing frosts occurred over the higher agricultural valleys on the 12th and over some of the lower agricultural valleys on the 18th. On the 22d and 23d killing frosts occurred over nearly all sections of the State, although there were a few localities where crops remained undamaged by frost till the close of the month. The rainfall was above the normal over most of the State, although it was quite unevenly distributed. Much cloudy and rainy weather prevailed during the first twelve days of the month during which period the greater portion of the precipitation fell. During the last half of the month the weather was unusually clear. Little or no snow fell, except in the mountains; at Dome Lake, in the Big Horn Mountains the snowfall was 12 inches, and at Lake Yellowstone, Y.N.P., 8 inches. The greatest rainfall was 4.86 inches, and the greatest amount in any twenty-four hours 1.60 inches.

In Colorado unusually cool and wet weather prevailed during the first two weeks, practically all the monthly precipitation occurring before the 15th. The last half of the month was dry and comparatively warm, except for a cool spell from the 21st to the 24th, when frost occurred at most of the higher stations. The highest temperature reported was 94° and the lowest 14°. The average precipitation for the State was the greatest for September since the beginning of the records. The average for that part of the State in District No. 6 was 1.67 inches above the normal. Showers occurred almost daily until the 13th, the heaviest falls occurring on the 4th and 5th, and on 13th and

14th. The greatest monthly rainfall was 7.42 inches and the greatest fall in twenty-four hours 4.65 inches.

The mean temperature for Nebraska was almost exactly normal. Freezing temperatures and killing frosts occurred quite generally in the northwestern portion of the State on the 23d and 24th, but in the southern and easten counties the frost, if any on these dates, was light, and no heavy or killing frost occurred in these counties during the month. The highest temperature was 104° and the lowest 24°. The precipitation for the State averaged about three-fourths of an inch above the normal. The excess was greatest in the eastern counties, where the rainfall was nearly twice the normal. The rain was well distributed through the first three weeks, while little or none fell during the last week of the month. One third more than the normal number of rainy days occurred, while the cloudiness was slightly above the normal amount. The greatest rainfall was 8.49 inches, and the greatest amount in twenty-four hours 4.80 inches.

In Iowa the hot and droughty conditions prevailing at the close of August were broken by lower temperatures on the 1st and copious and general showers on the 2d of September. The highest temperature was 94° and the lowest 30°. Light frosts occurred on low ground in the extreme northern part of the State on the 1st and 5th, and in all parts of the State on the 23d, 24th, and 27th. On the last named date the frost was heavy on low ground over the northern and northeastern counties, but reports indicate that no damage was done to vegetation, except in a very few places where some of the tender vines were injured. From the 2d to 14th showers occurred in some part of the State every day, and were general and the rainfall was heavy between the 12th and 14th. Another period of showery weather prevailed between the 19th and 24th. The heaviest rainfall was 7.34 inches, and the greatest fall in twenty-four hours 2.54 inches.

The month was characterized in Kansas by normal temperature, excessive precipitation, much sunshine, and but few high winds. The temperature was above the normal in the Kaw River Valley and in most of the Valley of the Republican. The temperature reached its maximum on the 1st and 2d in southwestern counties, and on the 11th over the rest of the State. The highest reported was 103°, and the lowest 26°. Light frosts were general on the 27th and 28th. The precipitation was above the normal, except in the extreme southeastern counties and in the northern portion of Rawlins County. The excess was greatest in Shawnee and Douglas counties, being 7.92 inches at Topeka and 7.80 inches at Lawrence. It was also 7.13 inches above the normal at Atchison. The greatest rainfall was 11.49 inches at Lawrence, and the greatest fall in twenty-four hours was 8.08 inches at Topeka. Nearly all of the rain fell during the first fifteen days, the rest of the month being quite dry with a very large per cent of sunshine. There were few high winds, although thunderstorms were quite frequent during the first part of the month.

The marked features of September weather in Missouri were the unusually high temperatures of the first two weeks over the southern division, and the cool weather with frosts during the last decade. The weather continued warm south of the Missouri River, until the 14th, making seven weeks of nearly continuous high temperature. The mean temperature for the month averaged from 1° to 3° below the normal over the northwestern and northeastern plains; in the southern districts there was quite a noticeable excess of temperature at nearly all stations. The highest temperature reported was 105°, and the lowest 28°. On the morning of the 28th freezing temperatures occurred at a number of stations in the Ozark region. The heaviest precipitation occurred along the Charitan, Grand, and Missouri watersheds, the total monthly falls ranging from 5 to over 12 inches. The precipitation over the greater part of the Ozark region, including the Gasconade, Osage, White, and Neosho watersheds was noticeably deficient. The heaviest rainfall was 12.04 inches and the greatest amount in twenty-four hours 4.48 inches. The percentage of sunshine was slightly below the normal.

TEMPERATURE.

The temperature averaged considerably above the normal in the northern part of the Missouri watershed, about normal in central districts and slightly below the normal in the southern States. The highest temperature recorded was 105° in Cedar County, Mo. The lowest was 9° in the Yellowstone National Park. Temperatures above 100° occurred in Nebraska, Kansas, and Missouri, and above 90° in other States. Temperatures below freezing occurred in all States.

PRECIPITATION.

The rainfall of the whole watershed was considerably above the normal, especially the western portions. The heaviest rainfall was 12.04 inches at Lexington, Lafayette County, Mo. The greatest fall in any twenty-four consecutive hours was 8.08 inches at Topeka, Kans., on the 6–7th. The heaviest snowfall reported was 17.5 inches at Corona, Grand County, Colo.

RIVERS.

The large rainfall over the various drainage basins in Montana caused the streams to be above the normal for the season in that State. The heavy rains in the early part of the month in Colorado caused high water in the Arkansas River and its tributaries, but the resulting damage was comparatively small. The larger rivers in this district had about the usual September flow.

MISCELLANEOUS.

The high water in the Arkansas River made it necessary to operate the power plant at the Garden City reclamation project, Kansas, only for a short time during the first part of the month. Water from the river was available for irrigation throughout the remainder of the month. Seventy-nine acres of land were irrigated with pumped water, and 2,602 acres with river water.

The Yellowstone River was unusually high at the lower Yellowstone project, and several unexpected rises somewhat interfered with the work.

The weather conditions were, on the whole, very favorable for outside work during the greater part of the month.

The month closed with the soil in some central and western counties in South Dakota becoming too dry, and in part of Missouri the monthly rainfall was insufficient for agricultural needs. Over the greater part of this district, however, the rains of the month put the soil in excellent condition for plowing and for seeding winter grains. The dry and warm weather of the last part of the month caused corn to dry out rapidly and little or no damage was done this crop by frost.

Severe local rain and hailstorms occurred in the Gallatin and upper Yellowstone valleys in Montana on the 2d and 3d. The area affected included a rich agricultural district, and much damage was done to grain, hay, and other crops. Heavy wind squalls did material damage on the 12th in northern, western, and southwestern Iowa in blowing down corn. The section director in South Dakota, reports that there were fewer thunderstorms than usual for September, except in southeastern counties. Some of them were accompanied by hail or local high wind, however, and some damage was done to farm buildings.

TABLE 1.—*Climatological data for September, 1909. District No. 6, Missouri Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Wyoming.																			
Arapahoe	Fremont										0.57		0.15	0.0	7				sw.	David Malloy.
Barnum	Johnson	5,500	4								1.57	+ 0.55	0.75	0.0	4	24	4	2	w.	Thos. Freeguard.
Basin	Big Horn	3,856	10	59.6	− 1.2	88	10	31	23†	43	0.36	− 0.05	0.18	0.0	3	18	5	7	nw.	O. J. Robertson.
Bennett	Carbon										1.73		0.65	0.0	8	20	5	5	w.	Chas. C. Young.
Cheyenne	Laramie	6,088	38	57.0	− 0.2	81	2	29	23	41	1.37	+ 0.43	0.85	0.0	9	13	11	6	nw.	U. S. Weather Bureau.
Cheyenne Exp. Farm	do	6,000	3																	Irrigation Inves. Office.
Chugwater	do	5,282	8	59.6	+ 2.3	87	10	25	24	55	0.60	− 0.64	0.50	0.0	2	24	5	1	w.	George Milne.
Clark	Big Horn	4,320	4	60.0		85	10	35	22	33	1.69		0.41	0.0	10	13	8	9	n.	Chas. A. C. Snow.
Crystal Lake Reservoir	Laramie	6,900		58.8		81	3	20	24	53	1.00		0.40	0.0	3	11	11	4	sw.	L. E. Jenson.
Douglas	Converse	4,793		61.2		87	25	33	24	50	1.37		0.58	0.0	5					Henry C. Miller.
Dubois	Fremont	6,909	3	51.2		78	26	19	20	43	1.27		0.74	T.	4	15	10	5	w.	Dr. F. H. Welty.
Eaton's Ranch	Sheridan	4 600	4	59.9		89	28	34	22	34	2.92		0.95	0.0	7	19	8	3	nw.	F. A. Eaton.
Echeta	Crook										2.17		0.80	0.0	4	22	4	4	n.	M. R. Hunter.
Elk Mountain	Carbon		4								1.40	+ 0.07	0.53	4.0	8					Wm. Richardson.
Encampment	do	7,322		55.2		76	3†	27	22	38	1.66		0.46		8	21	3	6	sw.	U. S. Forest Service.
Ervay	Natrona					82	3				2.30		0.90	0.0	6				sw.	Frank Jameson.
Filmore	Albany	7,527	3								1.81	+ 0.26	0.55	0.0	5					Jas. Dougherty.
Fort Laramie	Laramie	4,270	32	62.1	+ 2.1	90	10†	28	24	55	1.13	+ 0.19	0.58	0.0	8	17	10	3	w.	John Hunton.
Gillette	Crook	4,546	3	60.8		86	9	34	22	44	2.14		0.73	0.0	7	14	4	8		S. D. Perry.
Granite Canyon	Laramie	7,337	4	52.8	− 0.9	78	2	26	23	44	0.88	− 0.24	0.53	0.0	5	20	4	6	w.	Wm. Boyce.
Hunter's Station	Johnson	8,000	3	49.0		74	26†	21	23	39	2.11		1.10	3.0	9	17	7	6	w.	August Hettinger.
Hyattville	Big Horn	6,632	10	59.8	+ 0.7	90	28	30	23	41					1	15	6	9	w.	Wm. Booth.
Independence	Natrona			55.4		85	24	20	28	64	1.26		0.40	0.0	7	16	5	9	sw.	Henry D. Schoonmaker.
Kaycee	Johnson		8																	A. Grigg.
Kirtley	Converse		5	58.2	− 0.1	85	11	27	23	46	1.04	− 0.12	0.38	0.0	5	22	3	5	nw.	D. M. Zum Brunnen.
Kirwin	Big Horn	9,187	1	43.8		67	27†	18	23†	37	1.32		0.50	0.8	7	13	10	7	w.	C. L. Tewksbury.
Knowles	Crook										2.86		0.75	0.0	9					G. A. Knowles.
Lander	Fremont	5,372	17	56.5	+ 1.3	83	28	25	23	44	0.76	− 0.26	0.29	0.1	8	10	16	4	sw.	U. S. Weather Bureau.
Laramie	Albany	7,188	18	54.0	+ 0.5	79	3	23	22	45	0.97	0.00	0.32	0.0	5	14	14	2	s.	University of Wyoming.
Leo	do	6,878	8	52.0	− 1.0	78	27	20	23	42	2.03	+ 1.06	1.01	T.	9	10	10	10	w.	C. A. Cowdin.
Lolabama Ranch	Big Horn	7,052	6	51.8	+ 2.7	75	27†	22	23	51	1.62	+ 0.80	0.70	0.0	9	10	15	5	w.	Mary E. Painter.
Lovell	do		4	60.2		88	26†	30	24	50	1.02		0.43	0.0	7	13	8	9	w.	R. Fred Harrison.
Lusk	Converse	5,007	19	57.3	− 0.6	82	25†	30	23†	47	1.75	+ 1.03	1.00	0.0	3					D. E. Goddard.
Luther	Laramie							29	23		1.69		0.76	0.0	6					Henry D. Colburn.
Manville	Converse	5,050									1.39		0.70	0.0	6	24	1	5	nw.	C. A. Sherman.
Moorcroft	Crook	4 211	6																	Jas. K. Somers.
Moore	Albany	6,000	8	57.8	+ 1.8	84	26	27	24	48	0.88	− 0.74	0.27	0.0	7	13	12	5	w.	Edwin Moore.
Newcastle	Weston	4,319	2	60.4		90	26	29	23	48	1.62		1.02	0.0	5	15	14	1	nw.	Dr. S. W. Johnson.
Pathfinder	Natrona	5,735	3																	U. S. Reclamation Service
Phillips	Laramie	4,900	6	59.4	+ 1.0	86	30	33	24†	49	1.49	+ 0.29	0.76	0.0	4	16	9	5	nw.	Mrs. Arthur Rugg.
Pine Bluff	do	5,038	9																	C. W. Johnson.
Powell	Big Horn	4 376	2	59.8		87	28†	31	23	45	0.69		0.38	0.0	4	8	16	6	w.	U.S. Reclamation Service
Riverton	Fremont		2																	Robert P. Quest.
Saratoga	Carbon	7,300	12	53.9	− 0.2	77	26†	24	23	42	1.25	+ 0.36	0.30		7	16	7	7	e.	Supt., S. & E. R. R.
Sheridan (1)	Sheridan	3,790	14	58.2	+ 1.4	89	26	30	24	51	1.69	+ 0.57	0.81	0.0	10	11	11	8	nw.	U. S. Weather Bureau.
Sheridan (2)	do	3,738	14	58.4	+ 1.6	88	26	29	24	52	1.74	+ 0.62	1.04	0.0	3	15	12	3	nw.	Geo. Brundage.
Shoshone Dam	Big Horn	5,385	3	60.5		89	27	26	23	40	0.89		0.28	0.7	10	12	12	6	w.	U. S. Reclamation Service
Soldiers' Home	Johnson	4,635	17	60.2	+ 2.1	86	26	35	23	42	1.86	+ 1.11	0.91	0.0	8	11	18	1	nw.	Geo. L. Courtney.
South Pass City	Fremont			47.2		74	27	18	23	45	1.95		1.49	0.2	6	14	10	6	sw.	John Sherlock.
Thermopolis	do	4,350	7	60.8		90	28	29	23	53	1.22		0.45	T.	7	19	6	5	sw.	A. L. Duhig.
Upton	Weston										4.86		1.60	0.0	7	13	10	7	nw.	G. E. McPherren.
Valley	Big Horn	6,500									1.35		0.36	0.0	9	17	4	9	w.	Jas. L. McLaughlin.
Verona	Sheridan										2.76		1.23	0.0	4	7	23	0	se.	O. A. Roode.
Wiley	Big Horn	5,375		58.7		85	25	29	23	38	0.86		0.23	T.	6	11	13	6	w.	C. D. Marshall.
Wyncote	Laramie	4,207	2	64.4		87	11	36	28	45	0.60		0.30	0.0	2	26	1	3	nw.	U.S. Reclamation Service
Yellowstone Park	National Park	6,200	22	51.4	− 2.0	75	25	26	23	36	2.45	+ 1.44	0.87	T.	12	8	9	13	sw.	U. S. Weather Bureau.
(1) Fountain	do			47.3		76	27	16	23	46	3.51		1.10	3.0	10	14	4	12	s.	U. S. Army.
(2) Grand Canon	do			44.0		69	26	19	23	44	2.62		0.80		15	9	3	18	ne.	Do.
(3) Lake Hotel	do	7,733	5	45.6		70	27	19	23	40	1.75		0.52	8.0	14	11	17	2	s.	Do.
(4) Norris Geyser	do	7,525	5	44.4		70	28†	18	23	44	1.92		0.52	3.0	9	8	3	19	w.	Do.
(5) Riverside	do	6,500	3	47.7		75	25	17	23	54	2.74		0.76		12	9	10	11	s.	Do.
(6) Soda Butte	do	7,000	4	47.2		78	28	16	23†	58	1.51		0.80	1.0	6	16	7	7	sw.	Do.
(7) Sylvan Pass	do	7,000	2	47.0		74	8	21	22	47	4.09		0.72	0.0	11	13	11	6	sw.	Do.
(8) Thumb	do			46.6		73	28	20	23	42	2.63		0.76	5.0	11	13	14	3	n.	Do.
(9) Tower Falls	do			51.0		82	28	9	22	58	0.59		0.21	0.0	7	15	2	13	ne.	Do.
(10) Upper Basin	do	7,395	5	44.3		69	27	21	23†	39	2.50		1.20	0.0	3	18	2	10	sw.	Do.
Montana.																				
Adams	Dawson		1	60.8		90	10†	32	23	43	0.77		0.29	0.0	8	16	5	9	nw.	W. B. Ennis.
Adel	Cascade	5,200	11	54.0	+ 2.1	79	28	40	30	36	5.47	+ 3.85	2.70	0.0	11	16	1	13	w.	B. F. Burch.
Agricultural College	Gallatin	4,700	10	53.9	+ 0.6	80	25	30	23	40	5.54	+ 3.78	1.03	1.0	13	7	19	4	se.	Prof. E. Burke.
Augusta	Lewis & Clark	4,071	10	54.5	+ 2.3	81	6†	28	23	49	3.70	+ 2.56	1.65	0.0	5	21	4	5	w.	C. C. Covington.
Babb	Teton	4,461	4	54.9		82	6	29	5	52	1.60		0.73	0.0	4	13	12	5	sw.	U.S.Reclamation Service
Bald Butte	Lewis & Clark	6,500									3.09		1.38	0.0	10	11	8	11		M. W. Alderson.
Big Creek	Park	5,800									4.14		0.77	0.0	8	3	18	9	w.	Peter Vink.
Big Timber Creek	Sweetgrass	4,070																		W. H. Patterson.
Billings	Yellowstone	3,115	15	59.2	− 1.2	91	25	23	19	60	0.79		0.25	0.0	6					U. S. Weather Bureau.
Boulder Nursery	Jefferson		16	50.2°	− 1.9	77°	9†	26°	23	45°	4.84	+ 3.64	1.80	0.0	8	10°	10°	7°		R. H. Spencer.
Bowen	Beaverhead	6,060	3	53.4		87	29	27	30	44	2.71		0.89	1.9	9	10	7	13		B. B. Lawrence.
Bridger	Carbon	3,664	1	61.2ª		89ª	10	32ª	23	43ª	1.48		0.49	0.0	5	11ª	8ª	10ª	s.	L. E. Gard.
Broadview Exp. Sta	Yellowstone		3	58.0		87	10†	27	24	47	1.85		0.79	0.0	8	17	7	6	nw.	Thos. S. Hunt.
Browning	Teton	4,440									T.		T.	0.0	0	14	8	8	w.	Thos. B. Magee.
Busby	Rosebud		6																	
Busteed	Sweetgrass		2	57.6		85	10†	29	19	46	2.64		0.55	0.0	10	15	8	7	w.	T. H. Busteed.
Butte	Silver Bow	5,716	16	54.3	+ 2.0	78	9	30	23	35	3.25	+ 2.12	0.65	0.0	10	12	2	16	nw.	J. R. Wharton.
Canyon Ferry	Lewis & Clark	3,644	11	57.3	+ 1.2	85	9	31	23	43	1.90	+ 0.86	0.51	0.0	10	15	6	9	nw.	A. C. Pratt.
Cascade	Cascade	7,336	6																	E. E. James.
Cataract Creek	Jefferson	7,000									3.74		0.85	0.0	11	11	14	5	w.	Fred Gerdes.
Chessman Res.	Lewis & Clark	5 275	1	50.1ª		72ª	9†	31ª	21	34ª	3.46		1.35	T.	7	18	2	10	sw.	Chas. D.Schmidt.
Chester	Chouteau	3 140	6																	B. B. Weldy.
Chinook	do	2,205	13																	Thos. O. Hanlon Co.
Chouteau	Teton	3,810	4	55.8		84	9	28	30	52	1.30		0.70	0.0	2	18	2	10		H. Van De Reit.
Clear Creek	Chouteau		4	59.4		88	10	32	23	42	1.40		0.46	0.0	7	13	14	3	w.	C. Sedgwick.
Clemons	Lewis & Clark	4,672									3.94		1.98	0.0	4	12	8	10	w.	Frank Eberl.
Columbus	Yellowstone	3,160																		O. F. Wilkinson.
Copper	Meagher										1.76		0.80	T.	10	15	5	10	w.	Orville Harris.
Crow Agency	**Rosebud**	**3,041**	**29**	**59.4**	**+ 0.7**	**86**	**10†**	**31**	**24**	**46**	**1.00**	**+ 0.10**	**0.31**	**0.0**	**6**	**22**	**0**	**8**	**nw.**	**F. E. Server.**
Culbertson	**Valley**	**1,927**	**9**																	**G. H. Coulter.**

TABLE 1.—*Climatological data for September, 1909. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana—Cont'd.																			
Cut Bank	Teton	3,700	11	56.6	+ 6.2	86	7	29	4†	51	0.50	− 1.20	0.45	0.0	2	16	7	7	w.	Chas. N. Thomas.
Decker	Rosebud	3,400	5	59.2		95	2	31	6	56	2.00	+ 0.57	2.00	0.0	1					Adam Anderson.
Deep Creek	Broadwater	4,200									3.44		1.90	0.0	5					Mrs. D. W. Maryott.
Delphine	Meagher	5,000									4.43		1.60	T.	12	11	8	11	w.	Tracy L. Holliday.
Denton	Fergus		2	55.6[i]		85[i]	25	31[i]	19	50[i]	3.58		1.07	0.0	9	20	3	7	nw.	R. M. Chamberlain.
Dillon	Beaver Head	5,147	12	55.8	+ 2.2	84	27†	30	23	43	4.14	+ 2.66	1.31	T.	11	13	6	11	sw.	J. E. Monroe.
Dirty Creek	Meagher	6,000									2.93		0.72	T.	13	14	8	8	w.	Lewis Cameron.
Dry Creek	Broadwater	5,500																		J. C. Stuart.
Dry Wolf Camp	Cascade	6,000																		Mrs. R. J. Eveleth.
East Gallatin River	Gallatin	6,300									4.20		1.76	6.0	10	10	9	11	w.	John Eberhart.
Ekalaka	Custer		8	62.3		93	27	34	22	42	1.56		0.48	0.0	7	21	1	8	w.	W. Freese.
Elkhorn	Jefferson	6,576									0.89		0.25	1.0	10	4	20	6	sw.	J. W. Skelton.
Evans	Cascade	4,900																		H. Thrasher.
Fallon	Custer	2,208	5	61.8		95	10	29	24†	52	0.87		0.67	0.0	2	15	7	8	nw.	Mrs. A. C. Gifford.
Family	Teton	3,950	1	56.6		85	7	28	24	51	T.		T.	0.0	0	14	10	6	w.	U. S. Reclamation Service
Fish Creek	Silver Bow	8,500		47.0		66	9†	26	22	28	3.59		1.23	8.0	12	9	7	14	w.	O. B. Tilton.
Fish Tail Creek	Carbon	5,000									3.08		0.83	0.0	12	14	9	7	w.	O. E. Haskin.
Flathead Creek	Gallatin	6,000									4.46		0.75	2.0	9	9	13	8	nw.	L. G. Brown.
Forsyth	Rosebud	2,514	3	62.8[d]		93[c]	10	33[d]	24	49[d]	1.32		0.51	0.0	5	13[a]	11	5		Thos. M. Patterson, jr.
Fort Benton	Chouteau	2,630	30	59.8	+ 2.6	87	9	36	18†	45	1.75	+ 0.78	0.50	0.0	6	16	10	4	sw.	River Observer.
Fort Shaw	Cascade	3,500	21	58.8	+ 3.2	85	25	32	23	49	1.48	+ 0.70	0.69	0.0	5	9	8	13	w.	U. S. Reclamation Service
Fort W. H. Harrison	Lewis & Clark	4,004	6	57.5		85	25	35	24	48						19	5	6	sw.	Post Hospital.
Foster	Yellowstone		1	61.5		95	25†	28	24	60	0.85		0.40	0.0	7	14	11	5	s.	E. K. Bowman.
Garneil	Fergus	5,500	1	50.8		72	28	26	23	33	3.39		1.25	2.0	9	12	7	11		J. E. Scally.
Glendive	Dawson	2,069	20	63.2	+ 4.6	88	27	34	24	45	0.70	− 0.38	0.55	0.0	2					W. B. Walker.
Goldbutte	Chouteau		4	57.6		87	25	24	23	51	0.16		0.10	0.0	3	17	8	5	sw.	J. T. Berthelote.
Graham	Custer		4	60.9[c]		94[c]	26	28[c]	24	59[c]	1.66		0.75	0.0	7	15[c]	6	4	nw.	J. S. Rue.
Grayling	Gallatin	6,700	6	47.1		74	25	14	23	53	3.08		0.90	2.0	11	5	10	15	sw.	P. Kerzenmacher.
Great Falls	Cascade	3,350	18	59.6	+ 2.5	84	26	37	20†	38	2.85	+ 1.76	0.97	0.0	9	14	9	7	sw.	S. H. Bauman.
Half Moon Pass	Fergus	6,500									5.34		1.30	6.0	14	7	17	6	w.	Thos. Stigen.
Half Way House	Broadwater	6,000									5.81		1.79	4.5	13	15	10	5	ne.	Gordon Deans.
Harlowton	Meagher	4,165	2	55.0[c]		82[c]	9	28[c]	19†	47[c]									w.	Jos. Muir.
Hassel	Broadwater	5,200									3.11		0.66	0.0	8	0	22	8	sw.	E. C. Albrecht.
Havre	Chouteau	2,505	29	60.6	+ 4.4	91	28	32	4	48	0.94	− 0.09	0.48	0.0	9	12	15	3	sw.	U. S. Weather Bureau.
Helena	Lewis & Clark	4,110	30	56.2	0.0	81	28	34	23	38	2.14	+ 1.08	0.89	0.0	9	9	8	13	sw.	U. S. Weather Bureau.
Highwood	Chouteau										4.74		1.41	2.0	14	16	1	13	ne.	W. S. McCord.
Home Park	Madison										2.52		0.75	2.5	5	13	5	12	se.	H. L. Miller.
Huntley	Yellowstone	3,014	4	62.2		92	25	31	19	54	0.80		0.55	0.0	3	14	12	4	nw.	U. S. Reclamation Service
Jones Canyon	Gallatin	6,800									4.34		0.77	15.5	15				e.	Jas. McCune.
Jordan	Dawson		5	62.0		92	10	29	19	50	0.40		0.30	0.0	2	16	0	14	nw.	W. S. Henderson.
Kleinsmith Creek	Jefferson	6,000									2.37		0.53	0.0	11	9	16	5	w.	Mrs. E. W. Mills.
Lewistown	Fergus	4,010	12	56.0	+ 2.3	89	14	30	30	49	4.23	+ 2.58	1.16	1.0	11	10	10	10	nw.	W. W. Watson.
Livingston	Park	4,488	11	58.2	+ 0.5	85	9†	35	23	41	4.30	+ 2.86	1.66	0.0	11	12	8	10	sw.	Lewis Terwilliger.
Lodge Pole Creek	Sweetgrass	5,700																		F. G. White.
Lone Tree	Chouteau		5	60.5		87	25†	37	24	43	3.08		1.00	0.0	8	21	1	8	w.	E. Wilson.
Lost Horse Creek	Meagher	5,800									3.48		0.90	T.	13	9	13	8	w.	C. M. Mason.
Lubec	Teton	5,046	1																	
Malta	Valley	2,240	3	61.6		93	10	31	23	50	0.20		0.15	0.0	5	17	10	3	w.	U. S. Reclamation Service
Meadow Creek	Madison	6,700									2.06		1.50	8.0	7	17	3	10	e.	F. E. Parent.
Melstone	Fergus	2,903																		E. J. Parkinson.
Mildred	Custer										1.46		0.34	0.0	10	12	16	2	se.	Leon B. Clark.
Miles City	do	2,371	15	63.9	+ 2.7	94	10	36	24	44	1.11	+ 0.19	0.65	0.0	7	12	12	6	sw.	U. S. Weather Bureau.
Mill Creek	Park	5,500																		W. H. Edick.
Moore	Fergus										4.31		1.10	0.0	8	18	9	3	w.	Clyde Grove.
Mudd Creek	Deer Lodge																			Emery Mudd.
Norris	Madison	4,845	3	57.5		82	9	32	23	41	4.54		1.00	T.	8	12	3	15	s.	Madison River Power Co
Nye	Sweetgrass		1	50.4		79	27	25	5†	48	2.69		0.82	0.0	13	18	3	9	sw.	F. L. Bryant.
Olsen Creek	Jefferson	6,345									3.43		0.95	0.0	14	12	6	12	w.	Robt. Olsen.
Pipestone Pass	Jefferson	7,000																		Mrs. Theola Kiermeyer.
Poplar	Valley	2,020	25	61.9	+ 2.5	95	26	32	22	45	0.22	− 0.63	0.22	0.0	1	24	6	0	w.	H. M. Cosier.
Raymond	Teton	4,260	2	65.2[c]		95[c]	16	35[c]	11	55[c]	0.95		0.65	0.0	3	9[c]	15	3	w.	W. H. Campbell.
Rebers Ranch	Carbon	6,000																		E. A. Reber.
Red Lodge	do	5,548	9	53.2		78	7†	27	22	44	3.51		1.43	0.0	13	8	11	11	nw.	I. A. Draper.
Reese Creek	Gallatin	5,000									4.54		1.20	5.0	10	6	8	16		Henry Cramer.
Renova	Jefferson	4,383	10	55.8	0.0	82	25†	27	23	51	3.35	+ 2.25	1.50	0.0	11	12	9	9	sw.	F. B. Elmer.
Rimini	Lewis & Clark	7,900	1																	Milo Brooks.
Ryegate	Yellowstone	3,640	1	50.2		69	28	33	22	15	3.30		1.00	0.0	7				w.	H. W. Scherfenberg.
Sedan	Gallatin	3,155	2	51.6		86	9	25	23	47	3.18		1.11	2.5	11	9	13	8	w.	Jas. Woosley.
Springbrook	Dawson		8	61.0		99	26	29	4	54	1.11		0.32	0.0	6	13	10	7	w.	Mrs. H. L. Miller.
Stearns	Lewis & Clark	4,500									5.15		3.32	T.	5	18	2	10	w.	Jas. W. Hargrove.
Toknaj	Dawson	2,050	4	61.8		96	17	32	24	52	0.72		0.18	0.0	7	21	8	1		U. S. Reclamation Service
Toston	Broadwater	3,950	8																	W. H. Little.
Townsend	do	3,790									2.77		0.95		6					River Observer.
Trail Creek	Park	6,000									4.28		0.81	3.7	15	12	5	13	w.	Andrew Weidenbauer.
Utica	Fergus	5,000	16	56.0	− 0.3	81	10	31	23	36	4.27	+ 3.06	1.45	0.0	10	20	6	4	w.	P. W. Korell.
Valentine	do		3	59.8		90	25†	29	23	52	1.24		0.50	0.0	8	18	5	7	w.	B. M. Bean.
Virginia City	Madison	5,880	21	53.2[a]	− 0.3	76[a]	24	29	18†	40[a]	3.17	+ 1.75	0.87	6.0	14	6	13	11	e.	Francis Mailand.
Wall Rock Mountain	Broadwater	5,600									3.74		0.89	8.0	11	11	7	12		D. L. Doig.
Warm Springs Creek	Madison	7,500	1	41.6		58	10	20	23	20	3.82		1.23	8.0	15	4	6	20	sw.	M. D. Lytle.
West Rosebud Creek	Carbon										2.63		0.79	0.0	9	10	15	5		C. P. Whitten.
Willow Creek	Park	9,000									3.99		1.30	1.5		3	22	5	w.	John Topp.
Wolf Creek	Lewis & Clark	4,000	6	58.7		85	9†	37	23	42	3.45		2.30	0.0	9	14	8	8	w.	A. W. Varharen.
Wolf Point	Valley	1,995									0.00		0.00	0.0						River Observer.
Woodville	Jefferson	6,376									2.84		0.74	0.0	13	6	12	12	sw.	Anna Kinman.
North Dakota.																				
Aplin	Oliver		2	60.0[b]		90[b]	32	32[b]	22†	47[b]	0.81		0.35	0.0	7				s.	J. B. Hazelbarger.
Beach	Billings	2,750	2	59.4		90	26	34	24	41	1.20		0.43	0.0	6	12	14	4	nw.	D. J. Steiner.
Berlin	La Moure	1,470	16																	N. S. French.
Berthold Agency	McLean	2,052	12																	C. L. Hall.
Bismarck	Burleigh	1,674	34	60.7	+ 3.6	90	27	30	24	46	0.83	− 0.36	0.52	0.0	5	14	10	6	nw.	U. S. Weather Bureau.
Bowbells	Mercer		1	59.8		88	17	35	15†	40	0.93		0.50	0.0	4	13	13	4	se.	E. M. Walker.
Buford	Williams	1,944	3	62.8[a]		91[b]	17	34	21	48[b]	0.66		0.23	0.0	7					G. O. Sanford.
Coal Harbor	McLean	1,901	12	61.2[b]	+ 4.2	91[a]	9	34[b]	23	45[b]	0.81	− 0.66	0.23	0.0	6	13	0	17	nw.	F. H. Childs.
Dickinson	Stark	2,453	16	59.6	+ 3.1	88	8	34	15	45	0.83	− 0.17	0.42	0.0	9	12	11	7	se.	L. R. Waldron.
Edgeley	Lamoure	1,468	7	59.6		91	27	31	30	46	0.89		0.52	0.0	4	10	0	20	se.	O. A. Thompson.
Ellendale	Dickey	1,449	16																	U. S. Weather Bureau.
Epping	Williams		1								1.11		0.39	0.0	6	18	10	2	w.	J. C. Wilson.

TABLE 1.—*Climatological data for September, 1909. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota—Cont'd.																				
Fullerton	Dickey	1,439	10	58.8	+ 2.9	88	11	29	24	46	0.66	− 1.43	0.46	0.0	2	20	8	2	s.	F. O. Alin.
Haley	Bowman		1																	Myra Hart.
Hettinger	Adams	2,253	2																	F. E. Eliekson.
Howard	Williams	2,275	2	59.8		89	26	31	23	48	0.20		0.04	0.0	6	12	12	6	se.	C. B. Amsbaugh.
Jamestown	Stutsman	1,390	21	56.6	− 0.6	89	27	29	24	45	0.83	− 0.75	0.34	0.0	6	9	21	0	nw.	L. B. Baldwin.
Kulm	Lamoure	1,966	4																	J. F. Brenckle.
Lamoine	Kidder		1	58.0		91	11	30	22	42	1.60		1.32	0.0	3	20	7	3	nw.	E. V. Virgin.
Lamoure	Lamoure	1,307	2								0.54		0.24	0.0	3					A. H. Ormsby.
Manfred	Wells			58.5		91	11	29	22	42	0.32		0.22	0.0	3	16	10	4	nw.	
Marmarth	Bowman		1								1.55		0.72	0.0	8	16	9	5	se.	S. P. Crane.
Marstonmoor	Stutsman		1								0.41		0.41	0.0	1	17	10	3	se.	H. H. McCumber.
Medina	do	1,796	4																	M. Dwyer.
Medora	Billings	2,225	12	58.4[a]		90[b]	10	30	24	48[b]	1.10		0.50	0.0	4	13	13	4	e.	J. W. Hesser.
Melville	Foster	1,590	11	56.6[c]	+ 1.0	85[c]	8†	32[c]	23†	37[c]	0.96	− 0.20	0.48	0.0	2				nw.	J. P. Kidder.
Mott	Hettinger		2	59.4		92	27	28	23	48	1.25		0.98	0.0	5	11	8	11	e.	O. H. Opland.
Napoleon	Logan	1,955	17	58.2	+ 1.4	89	11	30	22	46	0.90	+ 0.27	0.80	0.0	2	20	4	6	se.	C. J. Hoof.
New England	Hettinger	2,400	13	57.4	+ 1.2	86	17	29	24	44	2.04	+ 1.04	1.25	0.0	5	18	4	8	se.	W. C. McKenzie.
New Salem	Morton	2,163	2	59.4		91	27	33	24	48	0.85		0.60	0.0	4	16	11	3	se.	J. Christiansen.
Orange	Adams		2	60.7		90	10†	32	19	47	1.20		0.33	0.0	8	18	6	6	se.	J. E. Goforth.
Palermo	Ward	2,200	5																	T. A. McCann.
Steele	Kidder	1,857	13	58.0[c]	+ 1.4	85[c]	27	32[c]	22	35[c]	0.62	− 0.64	0.62	0.0	1				sw.	B. C. Smith.
Swartwood	Bowman		1								1.97		0.98	0.0	10	16	6	8	se.	W. F. Adams.
Washburn	Mc Lean	1,731	5	61.6		91	27	35	22	43	1.27		0.44	0.0	5	17	10	3	s.	W. R. Peterson.
Williston	Williams	1,875	29	60.5	+ 1.0	88	26	34	24	39	1.07	+ 0.16	0.46	0.0	10	12	11	7	se.	U. S. Weather Bureau.
Wishek	McIntosh	2,010	4	56.2		86	27	30	24	47	0.80		0.80	0.0	1	16	10	4	se.	H. E. Timms.
South Dakota.																				
Aberdeen	Brown	1,300	20	59.2	0.0	88	11	32	24	48	2.05	+ 0.22	0.60	0.0	7	20	2	8	s.	D. G. Gallett.
Academy	Charles Mix		21	64.0	+ 0.7	93[b]	20	37[b]	5	39[b]	0.66	− 0.87	0.25	0.0	6	14	10	6	se.	I. T. Lothrop.
Alexandria	Hanson	1,352	21	61.7	− 0.2	88	20	35	24	38	1.77	− 0.57	1.34	0.0	3	14	14	2	se.	W. S. Hill.
Andover	Day	1,476									2.73		1.08	0.0	4					E. L. Stone.
Ardmore	Fall River	3,557	1								0.45		0.45	0.0	1	10	6	6		C. G. Hurlbut.
Armour	Douglas	1,521	16	62.1	− 0.9	90	20	32	23	48	1.02	− 1.22	0.70	0.0	5	16	12	2	sw.	J. S. Bean.
Ashcroft	Harding	3,192	18	59.5	+ 0.6	97[a]	27	28	24	52[a]	1.60	+ 0.62	0.76	0.0	5	20	3	7		Thos. AshCroft.
Belle Fourche	Butte	3,000	2	60.8		97	30	29	24	55	1.06		0.33	0.0	11	12	8	10	nw.	W. H. McGinley.
Bowdle	Edmunds	1,995	15	60.0	+ 1.3	88	9	33	23	44	1.75	+ 0.42	1.13	0.0	6	22	3	5	nw.	C. T. Smithers.
Brookings	Brookings	1,636	22	60.2	+ 0.6	86	12	31	15†	40	1.77	− 0.33	1.31	0.0	7	10	11	9	s.	Prof. C. Willis.
Burke	Gregory		2																	James Connell.
Canton	Lincoln	1,248	14	60.8	− 1.2	86	11	32	5†	40	3.25	+ 0.90	1.72	0.0	7	15	6	9	se.	John .H Holsey.
Cascade Springs	Fall River	3,422	2	61.0		89	11†	26	24	56	1.25		0.54	0.0	4	16	9	5	w.	Fred Norenberg.
Castlewood	Hamlin	1,685	4	59.1	− 1.9	85	10	32	5	40	1.02	− 1.34	0.27	0.0	8	13	7	10	se.	M. N. Bradley
Centerville	Turner	1,229	5	60.2	− 4.3	85[i]	11†	35[i]	5†	36[i]	5.85	+ 3.29	3.79	0.0	9					Frank Williams.
Chamberlain	Brule	1,363	12	63.8	− 0.7	91	11†	36	19†	43	0.66	− 0.56	0.41	0.0	2	22	3	5	sw.	G. A. Fry.
Clark	Clark	1,779	16	59.9	+ 0.6	85	11	34	5	41	0.96	− 1.63	0.32	0.0	9	12	16	2	sw.	O. H. La Craft.
Clear Lake	Deuel	1,800	7																	L. F. Hanly.
Clifton	Sully																			H. F. Chamberlain.
Cottonwood	Stanley		1	64.2		94	11†	29	24	51	1.13		0.40	0.0	7	16	10	4	se.	S. W. Sussex.
Daviston	Perkins		1			90	18†				2.30		1.00	0.0	6	15	10	5	w.	G. G. Davis.
Deadwood	Lawrence	4,535	1	57.6		89	26	30	19†	42	2.80		1.50	0.0	9	14	7	9		R. E. Grimshaw.
De Smet[1]	Kingsbury	1,726	18	60.6	+ 0.7	86	11	32	5	36	1.05	− 0.92	0.60	0.0	2					J. O. Purinton.
Dowling	Stanley	2,250	1	64.3		95	11	36	24	44	0.78		0.23	0.0	6	17	7	6	se.	M. P. Dowling.
Dumont	Lawrence	6,195	1								1.67		0.52	T.	10	11	11	8	sw.	A. B. Wood.
Elk Point	Union	1,127	11			94	12	40	5	35				0.0						M. Hoffman, jr.
Ellingson	Perkins																			R. E. Sheriff.
Englewood	Lawrence	5,723	1								1.92		0.67	T.	7	14	7	9	sw.	E. E. White.
Eureka	McPherson	1,884	1	61.0		90	27	33	24	43	1.25		1.04	0.0	6	21	6	3	nw.	W. D. Griggs.
Fairfax	Gregory		7	66.6	− 0.5	90	19†	40[a]	5	33[a]	0.68	− 0.88	0.25	0.0	5	18	10	2	nw.	J. T. Murphy.
Farmingdale	Pennington	3,000	14																	A. E. Nicholls.
Faulkton	Faulk	1,595	16	60.7	+ 0.7	87	11†	37	23	42	1.51	+ 0.10	0.72	0.0	3	19	7	4	se.	Miss Belle Talcott.
Flandreau	Moody	1,565	20	59.8	− 1.5	83	10†	35	5†	40	1.54	− 0.65	0.45	0.0	7	15	10	5	se.	G. A. Perley.
Forestburg	Sanborn	1,231	19	63.3	+ 1.2	94	20	33	24	44	1.19	− 0.57	1.06	0.0	2	16	9	5	se.	M. K. Judy.
Fort Meade	Meade	3,624	29	65.0	+ 4.5	94	26	37	24	44	1.50	+ 0.70	0.80	0.0	6	15	10	5	se.	Post Surgeon.
Frederick	Brown	1,371	3	60.4		90[b]	11	31[b]	24†	48[b]	1.19		0.87	0.0	4	22	7	1	s.	J. E. Jeffers.
Gannvalley	Buffalo		12	62.8	− 0.2	88	10†	34	15†	43	1.13	− 0.14	0.65	0.0	2	10	16	4	se.	V. P. Drips.
Greenmount	Lawrence	6,430	1								3.34		0.76	T.	11	14	4	12	sw.	John H. Leitel.
Greenwood	Charles Mix		15	65.4	0.0	91	20	35	24	44	1.12	− 1.03	0.74	0.0	4	19	6	5	e.	T. C. Williamson.
Hardy Ranger Station	Lawrence	6,600									2.61		0.89	T.	8	24	2	4	w.	Mrs. Mary E. Seals
Hermosa	Custer	3,349	4	61.5	0.0	91	11	33	22†	48	1.05	− 0.64	0.60	0.0	4	17	12	1		S. M. Booth.
Highmore	Hyde	1,890	16	62.9	− 0.5	90	11†	34	15†	48	1.70	+ 0.32	1.36	0.0	4	13	14	3	se.	P. H. Moore.
Hill City	Pennington	5,061	1								1.16		0.39	0.0	8	17	5	8	s.	Geo. A. Karr.
Howard	Miner	1,564	18	60.6	− 1.3	87[c]	20	33[d]	23	39[d]	1.38	− 0.86	0.55	0.0	7				se.	J. J. Cox.
Howell	Hand		8	61.0	+ 0.3	92	20	33	15†	47	1.74	+ 0.48	1.11	0.0	4	17	9	4	se.	M. A. Shuster, jr.
Huron	Beadle	1,306	29	61.0	+ 1.4	89	20	34	24	38	1.38	− 0.31	0.67	0.0	7	15	6	9	se.	U. S. Weather Bureau.
Ipswich	Edmunds	1,530	12	60.8	+ 2.0	88	11	34	5†	45	0.48	− 1.43	0.48	0.0	1	20	8	2	se.	J. B. Taylor.
Kadoka	Stanley	2,467	1																	Rev. D. S. Brown
Kennebec	Lyman	1,689	14	62.1		94[m]	11	33[c]	24	49[m]	0.77	− 0.07	0.45	0.0	2				se.	R. C. Van Horn.
Kidder	Marshall	1,295	6	61.8	+ 3.2	88	7†	28	24	47	0.80	− 1.45	0.80	0.0	1	23	3	4	se.	H. C. Schussler.
Kimball	Brule	1,788	20	62.5	+ 0.5	90	11†	37	23	45	0.96	− 0.26	0.69	0.0	2	21	3	6	se.	G. D. Rose.
La Delle	Spink	1,400	13																	E. L. Ebbert.
Lead	Lawrence	5,200	1	59.0		85	26	35	21†	36	2.36		1.03	T.	8	13	8	9		E. F. Irwin.
Lemmon	Perkins	2,345	1	60.4		90[a]	27	31[a]	23	42[a]	0.29		0.23	0.0	3	25	0	5	se.	W. E. Lyman.
Leslie	Stanley	1,225		65.8	+ 3.4	96[c]	27	38[c]	25	56[c]	0.90	− 0.32	0.90	0.0	1	17	4	9		C. E. Robinson.
Marion	Turner	1,447	9	61.8	− 1.2	87	12	37	13	46	1.63	− 1.52	0.61	0.0	6	11	13	6	se.	M. H. Dains.
Mellette	Spink	1,300	17	61.5	0.0	88[a]	20	32[a]	15†	44[a]	1.46	− 0.26	0.54	0.0	6	23	2	5	se.	Frank A. Howe.
Menno	Hutchinson	1,325	14	62.2	− 1.1	86	20	37	24	36	2.26	− 0.05	0.84	0.0	6	14	4	12	se.	J. H. Swanton.
Mitchell	Davison	1,312	14	61.0	− 1.4	88	20	36	5†	43	1.87	− 0.27	1.40	0.0	3	19	4	7	s.	C. W. Downey.
Murdo	Lyman	2,300	2	64.7		95	12	38	18†	45	0.63		0.28	0.0	3	21	3	6	se.	L. C. Bode.
Orman	Butte	2,920	4	62.6	+ 0.7	96	26	31	24	52	1.13	− 0.22	0.38	0.0	6	22	0	8	w.	W. H. Rader.
Ottumwa	Stanley		2	62.0		93	11	29	24	49	2.61		1.50	0.0	4	17	8	5	se.	H. Hallenbeck.
Pierre	Hughes	1,572	19	64.6	+ 1.8	94	11	40	24	42	1.19	+ 0.08	0.55	0.0	6	11	13	6	è.	U. S. Weather Bureau.
Plankinton	Aurora	1,528	19								1.22	− 0.70	1.12	0.0	4	12	11	7	se.	W. G. Andrews.
Pollock	Campbell		3	62.6		93[d]	11	25[a]	24	51[b]	1.11		1.10	0.0	2					J. H. Jones.
Rapid City	Pennington	3,251	22	61.6	+ 2.5	88	26	36	23	42	1.66	+ 0.40	1.15	0.0	5	16	9	5	w.	U. S. Weather Bureau.
Redfield	Spink	1,295	12	60.2	+ 1.2	89	10	35	23†	44	1.56	− 0.58	0.70	0.0	5	20	1	9	nw.	A. S. Hall.
Rosebud	Meyer	2,600	15	61.8	− 0.4	90	11	32	19†	54	1.07	+ 0.18	0.93	0.0	4	15	11	4	sw.	W. M. Ege.
Roslyn	Day		4																	O. O. Floren.
Running Water	Bon Homme										2.52		1.64	0.0	4					W. N. Isham.
Savoy	Lawrence	4,500									2.08		0.69	T.	10	5	5	10		W. J. Hall.

TABLE 1.—*Climatological data for September, 1909. District No. 6*—Continued.

Stations	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.					Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
South Dakota—Cont'd.																				
Selby	Walworth		1	61.8	.....	91	11	31	22	40	1.19	.....	0.92	0.0	2	13	14	3	se.	Miss Gertrude Hall.
Sioux Falls	Minnehaha	1,400	20	62.5	+ 0.2	87	11	34	5	47	2.00	− 0.22	0.90	0.0	7	11	4	15	se.	J. H. Bechtold.
Spearfish	Lawrence	3,647	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	O. A. Martin.
Stephan	Hyde	1,840	5	61.2	.....	90	11	31	24	48	1.24	.....	0.90	0.0	3	12	9	9	se.	Rev. A. Mattingly.
Tama	Meade	.....	1	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	J. J. Daily.
Vale	Butte	2,765	2	62.0	.....	95	26	27	24	53	1.61	.....	0.50	0.0	7	19	7	4	nw.	G. W. Shaw.
Van Metre	Lyman	.....	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	Thos. H. Hill.
Vermillion	Clay	1,222	8	61.8	.....	85	20	37	23	38	3.93	.....	1.44	0.0	11	19	1	10	se.	Prof. E. C. Perisho.
Water's Ranch	Lawrence	4,000	1	.....	.....	.....	...	.....	...	...	2.41	.....	1.05	0.0	8	...	...	...	.....	Geo. Waters.
Watertown	Codington	1,735	14	60.4	+ 1.9	87	10	35	5†	38	0.50	− 1.47	0.25	0.0	2	15	7	8	s.	Robert Q. Wood.
Wentworth	Lake	.....	19	61.0	− 0.1	85	20	38	23	37	1.37	− 1.12	0.36	0.0	8	21	5	4	s.	R. C. Zimmerman.
Wessington Springs	Jerauld	1,410	14	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	F. N. Dunham.
White Lake	Aurora	1,646	...	.....	.....	.....	...	.....	...	...	0.70	.....	0.70	0.0	1	11	11	8	s.	Mrs. G. A. Rogers.
Yankton	Yankton	1,234	37	62.6	− 0.7	87	20	40	24	34	3.67	+ 1.22	1.66	0.0	10	10	9	11	e.	U.S. Weather Bureau.
Minnesota.																				
Pipestone	Pipestone	1,710	10	59.6	+ 0.1	84	12†	33	5	37	1.07	− 1.86	0.51	0.0	3	15	14	1	se.	W. S. Campbell.
Colorado.																				
Akron	Washington	4,650	7	.....	.....	.....	...	.....	...	...	2.70	+ 1.61	0.74	0.0	6	...	...	...	.....	Ira M. Barnhouse.
Alma	Park	10,238	12	.....	.....	.....	...	.....	...	...	2.98	+ 2.23	1.30	T.	7	4	19	7	.....	W. H. Powless.
Arriba (near)	Lincoln	5,239	3	60.2	.....	86	1†	34	22	41	2.51	.....	1 70	0.0	3	18	8	4	sw.	C. S. Graves.
Auldhurst	Teller	8,500	...	.....	.....	.....	...	.....	...	...	6.11	.....	3.01	9.0	12	13	11	6	s.	Mrs. Alice A. Auld.
Barker	Boulder	8,000	2	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	E'n Colo. P. Co.
Boreas	Park	11,489	...	.....	.....	.....	...	.....	...	...	2.81	.....	0.68	1.8	9	2	24	4	nw.	Frank Soper.
Boulder	Boulder	5,347	13	62.2	− 1.3	90	2	35	22	36	4.51	+ 2.88	3.05	0.0	5	19	7	4	w.	S. A. Giffin.
Burlington	Kit Carson	4,160	5	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	C. Creglow.
Cassels	Park	8,445	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	Harriet M. Cassell.
Castle Rock	Douglas	6,220	18	55.0	− 4.8	79	30	28	22	41	3.98	+ 3.01	0.70	0.0	10	...	...	...	.....	Chas. Hy. Ellis.
Cheesman	Jefferson	6,890	6	57.6	− 1.1	85	2	32	23	42	3.58	+ 2.10	0.85	T.	9	21	7	2	sw.	C L. Adams.
Cheyenne Wells	Cheyenne	4,279	16	62.8	− 1.8	94	3	35	23	46	2.93	+ 1.64	1.72	0.0	4	17	8	5	s.	J. B. Robertson.
Como	Park	9,785	10	.....	.....	.....	...	.....	...	...	4.30	+ 3.63	1.61	2.0	8	...	...	...	.....	Edwin Pike.
Cope	Washington	.....	11	62.4[4]	− 2.5	91	10	33[a]	24	45[a]	1.17	+ 0.24	0.36	0.0	8	16	10	4	s.	A. A Williams.
Corona	Grand	11,660	2	38.2	.....	58	2†	14	22†	28	3.58	.....	0.76	17.5	14	...	...	...	w.	U. S. Weather Bureau.
Denver	Denver	5,272	37	61.2	+ 1.5	88	2	33	22†	36	3.39	+ 2.89	1.94	0.0	10	15	10	5	s.	U. S. Weather Bureau.
Edgewater	Jefferson	.....	1	60.8	.....	88	2†	33	22†	49	3.39	.....	1.45	0.0	6	21	9	0	.....	Dr. J. B. Fish.
Estes Park Hatchery	Larimer	8,000	...	.....	.....	.....	...	.....	...	...	1.56	.....	0.52	0.0	9	15	6	9	w.	Gaylord H. Thompson.
Fort Collins	....do	4 985	29	58.8	− 0.7	84	27	30	24	47	2.10	+ 0.96	0.95	0.0	7	18	7	5	nw.	Colo. Agri. College.
Fort Morgan	Morgan	4,319	14	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	Della M. Scott.
Frances	Boulder	9,300	4	51.3[a]	.....	77[a]	1	24[a]	22	31[a]	2.36	.....	0.80	T.	9	10	15	9	w.	D. A. Barry
Fry's Ranch	Larimer	7,500	...	53.4	.....	78	2†	25	23	46	1.08	.....	0.38	0.0	8	15	7	8	w.	Norman W. Fry.
Georgetown	Clear Creek	8,550	8	.....	.....	.....	...	.....	...	...	2.14	+ 1.49	0.76	3.5	7	18	5	7	.....	H. L. Corbett.
Greeley	Weld	4,649	18	61.9	+ 0.6	91	2	32	24	50	1.42	+ 0.64	0.46	0.0	7	19	6	5	se.	Nelson Reynolds.
Hartsel	Park	7,670	...	.....	.....	.....	...	.....	...	...	2.89	.....	1.10	3.0	12	22	2	6	.....	Emily Kleinknecht.
Hawthorne	Boulder	6,000	1	.....	.....	.....	...	.....	...	...	4.66	.....	2.70	0.0	9	23	4	3	.....	B. L.Chesebro.
Holyoke (near)	Phillips	3,745	13	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	E. E. T. Hazen.
Idaho Springs	Clear Creek	7,534	9	54.5	− 1.6	79	2	27	22	37	3.06	+ 2.10	1.10	0.0	8	....	....	....	e.	J. J. Wilis.
Keota	Weld	4,966	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	
Kessler	Boulder	7,720	2	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	E'n. Colo. P. Co.
La Port	Larimer	5,053	18	.....	.....	.....	...	.....	...	...	2.26	+ 1.07	1.10	0.0	5	...	...	...	.....	P. A. Taft.
Le Roy (near)	Logan	4,380	20	62.0	− 1.2	87	3	36	22†	43	2.81	+ 1.77	1.26	0.0	7	16	8	6	se.	Chas. Green.
Longmont	Boulder	4,980	7	61.0	.....	91	2	31	23†	47	1.85	+ 1.24	.....	0.0	7	17	7	6	.....	Geo. W. Johnson.
Long's Peak (near)	Larimer	8,600	14	48.6	− 0.2	74	3	20	23	40	1.70	− 0.12	0.70	0.0	6	13	8	9	w.	Enos A. Mills.
Moraine	....do	7,775	19	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	J. D. Stead.
Platte Canyon	Jefferson	5,492	10	.....	.....	.....	...	.....	...	...	4.86	+ 3.92	1.67	0.0	11	...	...	...	.....	Norman Steele.
St. Cloud	Larimer	7,750	...	.....	.....	.....	...	.....	...	...	2.28	+ 0.82	0.68	0.0	6	7	9	12	e.	Mrs. Phebe A. Campton.
Sedgwick	Sedgwick	3,573	1	63.2	.....	91	11	32	23†	53	2.95	.....	2.50	0.0	5	16	7	7	se.	Dr. Edwin Lewis.
Sill Mine	Clear Creek	11,500	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	Chas. F. Deininger.
Spicer (near)	Larimer	8,700	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	Frank W. Murphy.
Waterdale	....do	5,206	14	59.8	− 0.6	87	2	32	23†	46	2.66	+ 1.32	1.18	0.0	9	...	...	...	.....	P. H. Boothroyd.
Westlake	Boulder	.....	1	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	G. E. Richardson.
Wray	Yuma	3,512	15	64.1	− 0.5	91	11	32	24	50	0.95	− 0.41	0.35	0.0	5	16	9	5	se.	J. C. Tuomey.
Yuma	....do	4,138	18	.....	.....	.....	...	.....	...	...	1.78	+ 0.85	1.10	0.0	5	24	3	3	se.	Geo. W. Custer.
Nebraska.																				
Ainsworth	Brown	2,521	4	63.4	.....	91	28	34	19	42	3.28	.....	1.58	0.0	5	9	16	5	sw.	John M. Cotton.
Albion	Boone	1,747	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	F. A. Pittenger.
Alliance	Boxbutte	3,968	14	.....	.....	.....	...	.....	...	...	1.41	+ 0.62	0.51	0.0	4	17	10	3	nw.	Agent, C. B. & Q. R. R.
Alma	Harlan	1,939	12	65.8	− 0.4	95	11	34	24	48	2.82	+ 0.47	0.91	0.0	11	17	8	5	s.	W. A. Sharpnack.
Anoka	Boyd	.....	3	61.0	.....	90	10†	25	24	57	1.53	.....	0.72	0.0	5	12	10	8	nw.	W. Whitla.
Arcadia	Valley	2,186	...	.....	.....	.....	...	.....	...	...	1.49	− 1.41	0.50	0.0	5	17	5	8	sw.	J. L. Owen.
Ashland	Saunders	1,100	19	66.1	− 1.0	94	11	40	23†	43	5.09	+ 2.16	1.70	0.0	17	15	11	4	se.	A. S. von Mansfelde.
Ashton	Sherman	2,061	...	.....	.....	.....	...	.....	...	...	3.36	+ 0.89	1.35	0.0	7	19	4	7	se.	Fred Rein.
Atkinson	Holt	2,108	4	61.4	.....	88	29	35	24	50	3.06	.....	1.55	0.0	5	16	11	4	se.	C. J. Wilson.
Auburn	Nemaha	1,051	17	66.0	− 1.1	96	12	37	27†	46	4.48	+ 1.42	1.55	0.0	10	16	7	7	s.	J. R. Huffman.
Aurora	Hamilton	1,792	...	66.0	− 1.2	94	11	37	24	43	3.48	+ 0.13	1.08	0.0	5	21	1	8	e.	Agent, C. B. & Q. R. R.
Beatrice	Gage	1,235	18	66.0	− 1.1	92	12	39	23†	40	4.59	+ 1.82	1.85	0.0	9	19	5	6	sw.	W. S. Waxham.
Beaver City	Furnas	2,147	18	68.6	+ 1.2	100	11	36	23†	47	2.29	+ 0.40	0.90	0.0	6	17	7	6	se.	T. M. Davis.
Bellevue	Sarpy	1,210	5	66.2	.....	93	12	42	23	40	6.05	+ 2.55	1.25	0.0	11	15	5	10	se.	Bellevue College.
Bertrand	Phelps	2,515	...	.....	.....	.....	...	.....	...	...	2.41	.....	0.92	0.0	7	...	...	...	.....	W. F. Dobbin.
Blair	Washington	1,122	12	64.8	+ 0.2	89	11†	39	24	37	5.58	+ 2.20	1.33	0.0	11	16	9	5	sw.	H. H. Hahn.
Bloomfield	Knox	.....	...	63.2	.....	90	18	32	24	45	3.05	.....	1.00	0.0	7	15	8	7	s.	J. M. Barnard.
Bluehill	Webster	1,967	...	.....	.....	.....	...	.....	...	...	10.76	+ 7.27	4.35	0.0	7	13	6	11	.....	Agent, C. B. & Q. R. R.
Bradshaw	York	1,715	...	.....	.....	.....	...	.....	...	...	4.55	− 0.01	1.30	0.0	9	14	12	4	.....	E. C. Roggy.
Bridgeport	Cheyenne	3,800	13	62.8	+ 0.9	92	11	30	24	54	1.05	− 0.03	0.50	0.0	3	20	8	2	se.	R. H. Willis.
Brokenbow	Custer	2,477	15	62.2	− 0.8	94	11	28	23	51	3.18	+ 0 95	1.68	0.0	6	22	0	8	.....	Agent, C. B. & Q. R. R.
Burchard	Pawnee	1,377	...	.....	.....	.....	...	.....	...	...	1.60	− 2.66	0.50	0.0	5	21	2	7	.....	Do.
Burge	Cherry	2,674	1	62.2	.....	90	11	29	19	50	1.75	.....	1.35	0.0	5	21	6	3	se.	H. A. Davis.
Burwell	Garfield	2,180	...	.....	.....	.....	...	.....	...	...	.....	.....	.....	.....	...	...	...	...	.....	Agent, C. B. & Q. R. R.
Cairo	Hall	1,951	...	.....	.....	.....	...	.....	...	...	1.99	.....	1.12	0.0	7	...	...	...	.....	Elliott Harrison.
Callaway	Custer	2,555	17	64.2	+ 2.2	95	11	29	24	49	2.73	+ 0.75	1.70	0.0	2	15	7	8	s.	J. H. Evans.
Cambridge	Furnas	2,258	2	66.8	.....	98	11	31	24	51	1.47	.....	1.00	0.0	6	20	5	5	se.	Chas. Jensen.
Canton (near)[1]	Sioux	.....	1	58.5	.....	87	3	26	23†	55	0.34	.....	0.18	0.0	4	...	...	...	nw.	A. E. Hann.
Columbus	Platte	1,442	15	64.2	− 0.2	94	11	36	24†	46	4.73	+ 1.69	2.11	0.0	10	13	3	14	s.	C. C. Gray.
Cozad	Dawson	2,496	...	.....	.....	.....	...	.....	...	...	2.07	.....	0.98	0.0	4	18	6	6	s.	A. A. Luttin.
Creighton	Knox	1,600	12	63.1	+ 0.6	90	28	36	23†	44	3.43	+ 1.73	1.27	0.0	13	18	7	5	se.	C. H. Blood.
Crete	Saline	1,368	...	67.2	+ 1.0	98	11†	39	24	41	3.78	+ 1.38	1.45	0.0	8	13	11	6	n.	Doane College.
Culbertson	Hitchcock	2,565	7	67.1	.....	96	12	32	23†	51	3.01	+ 1.47	1.75	0.0	6	20	1	9	ne.	J. H. Corrick.
Curtis[b]	Frontier	2 553	14	65.2	+ 0.2	93	9	29	24	49	2.05	− 0.11	1.52	0.0	3	....	....	....	ne.	Dr. S. R. Razee.
David City	Butler	1,619	19	63.8	0.0	89	11	40	24	37	4.20	+ 1.58	1.28	0.0	13	15	8	7	se.	S.Clingman.

TABLE 1.—*Climatological data for September, 1909. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nebraska—Cont'd.																				
Dawson	Richardson	945	13	66.0	− 2.8	93	11	35	27	41	4.73	+ 1.20	1.95	0.0	9	18	6	6	s.	Mrs. E. I. Atkinson.
Dubois	Pawnee	1,074	....	....	....	....	....	....	....	....	6.89	.....	3.14	0.0	10	20	5	5	ne.	O. M. Backus.
Duff	Rock	....	....	....	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dewitt Eager.
Edgar	Clay	1,722	....	....	....	....	....	....	....	....	8.49	+ 5.37	4.80	0.0	6	11	13	6	.....	G. W. Ferree.
Ellis	Gage	1,430	....	....	....	....	....	....	....	....	7.60	.....	2.31	0.0	6	....	....	....	.....	D. J. Wood.
Elmcreek	Buffalo	2,268	....	....	....	....	....	....	....	....	2.92	.....	0.92	0.0	4	....	....	....	.....	E. L. Sutton.
Elsie	Perkins	3,382	....	....	....	....	....	....	....	....	2.02	.....	1.46	0.0	3	....	....	....	.....	J. L. Brittain.
Enderslake[f]	Brown	....	1	61.9	.....	91	28	30	21†	47	1.90	.....	1.05	0.0	4	....	....	....	sw.	C. D. Langley.
Endicott	Jefferson	1,288	....	....	....	....	....	....	....	....	3.30	.....	1.00	0.0	6	10	3	17	n.	Agent, C. B. & Q. R. R.
Ewing	Holt	1,888	3	62.6	.....	91	11	33	23†	46	5.27	+ 3.02	2.90	0.0	8	....	....	....	.....	G. H. Benson.
Fairbury	Jefferson	1,316	14	67.6	+ 0.4	96	11	39	23†	41	6.22	+ 3.47	1.94	0.0	12	16	10	4	se.	W. F. Cramb.
Fairmont	Fillmore	1,641	15	63.8	− 1.9	94	11	37	24	43	3.90	+ 1.11	1.13	0.0	7	18	0	12	s.	Agent, C. B. & Q. R. R.
Fort Robinson	Dawes	3,764	27	60.8	− 0.2	90	11	27	23	51	2.21	+ 1.14	0.70	0.0	8	21	3	6	w.	Post Surgeon.
Franklin	Franklin	1,820	15	66.8	+ 0.1	104	10	32	24	48	2.90	+ 0.34	1.00	0.0	5	20	6	4	se.	D. T. Shoemaker.
Fremont	Dodge	1,203	27	65.0	0.0	90	11	38	23	44	6.19	+ 3.33	2.28	0.0	10	14	9	7	se.	Ernest Hahn.
Fullerton	Nance	1,629	3	64.6	.....	93	18	34	24	41	5.58	.....	1.27	0.0	9	16	10	4	s.	Dr. F. W. Johnson.
Geneva	Fillmore	1,633	17	66.6	+ 0.6	92	12	39	24	37	5.10	+ 2.48	1.34	0.0	8	15	8	7	sw.	F. M. Flory.
Genoa	Nance	1,584	34	64.7	+ 0.4	92	11	34	24	47	3.29	+ 0.20	0.76	0.0	12	11	15	4	se.	F. W. Parsons.
Gordan[a]	Sheridan	3,550	1	59.4	.....	92	11	24	24	55	1.45	.....	0.81	0.0	7	13	15	2	sw.	G. F. Williams.
Gosper	Gosper	....	....	....	....	....	....	....	....	....	1.68	.....	1.00	0.0	4	16	8	6	se.	E. H. Stoll.
Gothenburg	Dawson	2,557	15	65.4	+ 0.8	95	11	31	24	51	1.37	− 0.62	0.95	0.0	4	15	4	11	se.	W. J. Bartholomew.
Grand Island	Hall	1,860	17	64.0	− 1.3	88	12	36	24	40	2.02	− 0.62	1.04	0.0	7	11	3	16	s.	E. A. Barnes.
Grant[a]	Perkins	3,405	5	63.3	.....	92	20	32	25†	48	1.72	.....	1.00	0.0	6	....	....	....	se.	Cyrus Carver.
Greeley	Greeley	2,021	2	64.8	.....	96	11	31	24	41	2.37	+ 0.26	1.05	0.0	7	17	9	4	se.	W. E. Morgan.
Guderiock	Webster	1,646	....	....	....	....	....	....	....	....	6.43	+ 2.83	2.80	0.0	8	12	10	8	s.	J. S. Marsh.
Haigler	Dundy	3,258	....	....	....	....	....	....	....	....	0.84	− 0.18	0.38	0.0	3	14	12	4	.....	Agent, C. B. & Q. R. R.
Halsey ‖	Thomas	2,695	6	64.1	.....	90	20†	30	24	50	4.62	.....	2.73	0.0	7	19	5	6	se.	U. S. Forest Service.
Hartington	Cedar	1,209	18	62.0	− 0.8	86	11†	38	5†	40	3.32	+ 1.48	1.10	0.0	8	12	6	12	sw.	D. E. Ewing.
Harvard	Clay	1,812	19	63.1	− 1.8	91	11	38	24	41	6.40	+ 3.54	1.46	0.0	12	13	11	6	se.	Dr. J. T. Fleming.
Hastings	Adams	1,932	16	63.0	− 2.3	87	9†	33	24	47	5.60	+ 2.95	2.06	0.0	6	18	5	7	se.	Agent, C. B. & Q. R. R.
Hayes Center	Hayes	....	5	64.5	.....	93	12	34	23	48	1.55	− 0.28	1.15	0.0	5	21	7	2	se.	C. A. Ready.
Hay Springs	Sheridan	3,821	22	60.4	+ 0.7	90	11	28	19	54	1.35	+ 0.32	0.45	0.0	5	10	16	4	s.	A. Kadlecek.
Hebron	Thayer	1,458	24	65.5	− 1.2	95	11	38	24	40	6.13	+ 3.43	1.46	0.0	8	....	....	....	.....	C. M. Easton.
Hendley	Furnas	2,231	....	....	....	....	....	....	....	....	1.76	.....	0.80	0.0	4	....	....	....	.....	F. A. Jones.
Holdrege	Phelps	2,324	15	65.8	− 1.8	90	11†	38	23	42	1.67	− 0.59	0.80	0.0	5	17	1	12	se.	Agent, C. B. & Q. R. R.
Hooper ‖	Dodge	1,228	12	65.4	+ 1.7	92	12	37	24	45	4.87	+ 0.99	2.16	0.0	12	11	13	6	se.	T. W. Lyman.
Imperial	Chase	3,278	20	64.4	− 0.4	90	11†	30	24	52	1.52	+ 0.18	0.83	0.0	5	19	3	8	se.	Robt. Malcolm.
Kearney[a]	Buffalo	2,146	17	66.3	− 1.0	96	11	33	23	43	3.31	+ 0.57	1.30	0.0	8	....	....	....	sw.	N. C. Dunlap.
Kimball	Kimball	4,697	21	60.4	− 0.5	84	3†	39	14	40	0.47	− 0.41	0.22	0.0	3	21	4	5	s.	F. J. Bellows.
Kirkwood	Rock	.....	14	63.4	+ 0.8	90	11	32	24	47	2.71	+ 0.33	1.93	0.0	8	....	....	....	nw.	Mrs. C. Arter.
Kowanda	Denell	....	....	....	....	....	....	....	....	....	1.86	.....	1.56	0.0	5	....	....	....	.....	Geo. W. Hulse.
Leavitt ‖	Dodge	1,228	....	....	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. T. Scilley.
Lexington	Dawson	2,385	20	63.8	+ 0.1	91	11	31	24	47	2.04	− 0.03	1.60	0.0	2	25	0	5	se.	Rob't Chadwick.
Lincoln	Lancaster	1,189	24	66.2	+ 1.0	96	11	41	24	39	4.69	+ 2.05	1.65	0.0	15	10	11	9	se.	U. S. Weather Bureau.
Lodgepole	Cheyenne	3,820	....	....	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Loup	Sherman	2,067	....	62.8	− 1.1	95	11	31	24	47	2.74	− 0.37	1.16	0.0	5	17	8	5	se.	.....
Loyal	Custer	....	....	....	....	....	....	....	....	....	2.40	.....	1.60	0.0	2	18	6	6	s.	C. H. Cass
Lynch[a]	Boyd	....	17	63.8	− 6.5	91	10†	30	24	50	1.98	− 0.14	1.20	0.0	4	20	5	5	s.	S. W. Lightner.
McCook[i]	Redwillow	2,506	9	62.8	.....	89	16†	25	24	58	.....	.....	.....	0.0	....	....	....	....	s.	C. G. Coglizer.
McCool Junction	York	1,575	....	....	....	....	....	....	....	....	3.72	+ 0.07	0.90	0.0	7	....	....	....	.....	L. L. Slagle.
Madison[b]	Madison	1,585	15	62.8	− 0.7	89	11	35	24	41	5.18	+ 2.15	2.10	0.0	8	....	....	....	se.	Dr. F. A. Long.
Marquette	Hamilton	1,830	....	....	....	....	....	....	....	....	3.87	+ 1.34	1.09	0.0	9	....	....	....	.....	John Ellis.
Mason City	Custer	2,257	....	....	....	....	....	....	....	....	1.66	.....	1.00	0.0	3	....	....	....	.....	J. A. Amsberry.
Minden	Kearney	2,169	26	65.0	+ 0.1	97	11	36	23	42	3.40	+ 0.71	1.15	0.0	8	15	8	7	se.	Joel Hull.
Mitchell	Scottsbluff	....	1	60.9	.....	87	3	31	23	48	0.54	.....	0.24	0.0	5	16	13	1	nw.	U.S. Reclamation Service
Monroe	Platte	1,525	....	....	....	....	....	....	....	....	3.70	+ 0.13	1.10	0.0	13	15	8	7	.....	Wm. Webster.
Nebraska City[d]	Otoe	941	27	69.0	+ 2.6	95	12	....	....	....	5.77	+ 2.03	1.38	0.0	9	17	10	3	s.	Agent, C. B. & Q. R. R.
Norfolk	Madison	1,532	24	62.1	− 1.4	90	11	35	23	41	3.64	+ 0.33	1.06	0.0	12	20	4	6	s.	Dr. P. H. Salter.
North Loup	Valley	1,961	21	64.7	+ 0.6	94	11	30	24	50	1.90	− 0.20	1.20	0.0	4	15	12	3	se.	W. G. Rood.
North Platte	Lincoln	2,841	35	64.0	+ 0.8	90	11	34	24	47	0.77	− 0.73	0.40	0.0	6	18	5	7	se.	U. S. Weather Bureau.
Oakdale	Antelope	1,722	21	61.2	− 1.5	89	11	32	24	40	4.13	+ 1.83	1.63	0.0	11	12	11	7	s.	G. S. Clingman.
Odell	Gage	1,278	....	....	....	....	....	....	....	....	7.96	+ 4.76	2.15	0.0	9	15	6	9	.....	Agent, C. B. & Q. R. R.
Omaha	Douglas	1,103	39	65.6	− 0.2	93	12	46	24	35	5.25	+ 2.22	1.51	0.0	11	12	8	10	se.	U. S. Weather Bureau.
Ord	Valley	2,062	....	....	....	....	....	....	....	....	2.23	− 0.43	1.21	0.0	8	15	7	8	s.	James Milford.
Orleans	Harlan	1,993	....	....	....	....	....	....	....	....	3.41	.....	1.71	0.0	6	....	....	....	.....	James McGeachin.
Osceola	Polk	1,644	....	....	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Palmyra[f]	Otoe	1,142	11	65.8	+ 0.3	92	11	42	27	....	5.83	+ 2.24	2.19	0.0	9	14	14	2	se.	Thos. Coles.
Pawnee City	Pawnee	1,175	6	67.0	.....	96	12	34	27	45	6.36	+ 3.14	2.98	0.0	10	23	2	5	s.	F. A. Barton.
Plymouth	Jefferson	1,419	5	65.8	.....	94	11	39	24	40	5.27	.....	1.90	0.0	8	11	13	6	se.	John Ruppel.
Purdum	Blaine	....	8	62.8	.....	90	20†	29	24	50	2.17	.....	0.82	0.0	8	17	6	7	se.	T. C. Jackson.
Ravenna	Buffalo	2,028	20	63.8	− 1.1	96	10	29	24	56	1.57	− 0.61	0.63	0.0	7	17	6	7	.....	Erastus Smith.
Redcloud	Webster	1,687	13	66.6	− 0.2	96	11	35	24	46	5.32	+ 2.52	1.60	0.0	7	18	7	5	s.	C. S. Ludlow.
St. Libory	Howard	1,887	....	....	....	....	....	....	....	....	2.81	− 0.07	1.73	0.0	9	20	5	5	se.	W. I. Meader.
St. Paul	....do.	1,796	15	65.7	− 0.4	95	11	34	24	50	2.50	− 0.19	1.30	0.0	6	18	7	5	se.	Paul Anderson.
Santee	Knox	.....	22	64.6	− 0.6	89	11†	38	5†	40	0.36	− 1.86	0.14	0.0	6	19	7	4	s.	E. G. Kendall.
Sargent	Custer	.....	1	62.4	.....	94	11	33	23†	48	1.57	− 0.05	0.90	0.0	3	20	0	10	se.	J. L. Ferguson.
Schuyler	Colfax	1,357	....	....	....	....	....	....	....	....	4.56	+ 2.05	1.85	0.0	11	11	4	15	nw.	Agent, C. B. & Q. R. R.
Scottsbluff	Scottsbluff	4,662	3	61.6	.....	87	11	32	23	48	1.77	.....	1.23	0.0	5	18	8	4	se.	A. B. McCoskey.
Seward	Seward	1,435	....	63.8	− 3.1	93	9	32	22	43	4.32	+ 1.33	1.20	0.0	7	15	10	5	ne.	Agent, C. B. & Q. R. R.
Sheridan	Wheeler	....	....	....	....	....	....	....	....	....	2.87	.....	1.33	0.0	7	15	10	5	nw.	J. C. Harris.
Sidney	Cheyenne	4,060	....	62.8	.....	99	11	32	23	52	1.84	+ 0.83	1.48	0.0	4	....	....	....	nw.	J. P. Fischer.
Springview	Keyapaha	....	18	63.2	− 0.2	90	20†	32	22	44	1.33	− 0.18	1.25	0.0	3	14	10	6	nw.	C. L. Phelps.
Stanton	Stanton	1,472	15	64.4	+ 0.2	89	11	33	23	41	4.82	+ 1.85	1.52	0.0	7	12	4	14	s.	Alfred Pont.
Stratton	Hitchcock	2,804	....	....	....	....	....	....	....	....	1.77	− 0.06	1.40	0.0	5	....	....	....	.....	Stella Vennum.
Superior	Nuckolls	1,574	....	....	....	....	....	....	....	....	5.37	+ 2.89	1.85	0.0	8	....	....	....	.....	Agent, C. B. & Q. R. R.
Syracuse	Otoe	1,059	....	....	....	....	....	....	....	....	5.45	+ 2.42	1.50	0.0	8	17	1	12	.....	Do.
Tablerock	Pawnee	1,023	....	....	....	....	....	....	....	....	5.16	+ 2.61	1.60	0.0	11	19	6	5	s.	E. D. Howe.
Tecumseh	Johnson	1,113	22	....	....	....	....	....	....	....	5.36	+ 2.67	.....	0.0	....	15	8	7	.....	Agent, C. B. & Q. R. R.
Tekamah	Burt	1,060	19	64.3	− 1.2	93	12	37	24	46	2.73	− 0.04	0.71	0.0	14	10	15	5	se.	A. D. Nesbit.
Turlington	Otoe	1,214	18	66.1	− 1.0	93	12	42	24	36	6.52	+ 3.06	1.93	0.0	13	17	8	5	se.	W. N. Hunter
University Farm ‖	Lancaster	....	8	66.6	.....	95	11	38	24	40	4.48	+ 1.19	1.64	0.0	10	14	12	4	.....	S. W. Perin.
Valentine	Cherry	2,613	21	61.9	− 0.4	90	28	34	19	45	3.18	+ 1.39	2.92	0.0	5	17	10	3	s.	U. S. Weather Bureau.
Wahoo	Saunders	1,187	....	....	....	....	....	....	....	....	6.01	.....	1.87	0.0	10	15	9	6	sw.	Wm. T. Mauck.
Wakefield	Dixon	1,387	13	62.8	− 1.0	89	12	33	23†	42	3.26	+ 0.08	0.77	0.0	11	11	10	9	s.	I. H. Weaver.
Wallace	Lincoln	3,116	....	....	....	....	....	....	....	....	1.77	+ 0.93	1.30	0.0	3	17	8	5	se.	Agent, C. B. & Q. R. R.
Walthill	Thurston	....	....	65.6	.....	95	9	33	23	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	Harry L. Keefe.
Watertown	Buffalo	2,299	....	....	....	....	....	....	....	....	1.13	.....	0.50	0.0	6	11	15	4	se.	R. E. Swift.

TABLE 1.—*Climatological data for September, 1909. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nebraska—Cont'd.																				
Wauneta	Chase										0.93	− 0.80	0.33	0.0	4					C. D. Fuller.
Weepingwater	Cass	1,080	3								4.86	+ 1.88	1.87	0.0						S. W. Orton.
Westpoint	Cuming	1,313	13	62.8	− 2.8	91	28	34	24	47	5.04	+ 2.13	1.14	0.0	10	19	5	6	s.	J. C. Elliott.
Wilber	Saline	1,325									3.82	+ 1.03	1.10	0.0	6	11	6	13		Agent, C. B. & Q. R. R.
Wisner	Cuming	1,380									5.83	+ 1.60	1.87	0.0	10	13	7	10	se.	Aoff & Deily.
Woodlawn	Lancaster	1,186									3.71		1.43	0.0	10	15	10	5	se.	H. C. Kendall.
York	York	1,606	17	66.2	− 0.7	92	12	37	23†	47	3.36	+ 0.36	0.96	0.0	9	17	8	5	se.	H. T. Gianque.
Iowa.																				
Afton‖	Union	1,212	14	63.8	− 1.3	90	12	38	27	32	2.78	− 0.87	1.01	0.0	8	11	11	8	sw.	N. W. Rowell.
Allerton ‖	Wayne	1,513	17	65.0	− 0.3	90	12	39	27	32	4.56	− 0.15	1.50	0.0	10	19	3	8	nw.	Mrs. Geo. Shriver.
Alta‖‖	Buena Vista		6	60.8		85	10	37	23	36	2.15		0.50	0.0	12	12	12	6	s.	David E. Hadden.
Alta (near)	do										2.16		0.43	0.0	12					W. J. Minard.
Alton	Sioux	1,305	3	61.0		85	11†	35	5†	37	4.42		2.20	0.0	10	12	11	7	se.	W. S. Slagle.
Atlantic	Cass	1,164	17	64.2	− 0.2	91	12	37	27	36	6.03	+ 2.54	1.54	0.0	11	12	3	15	sw.	Thos. H. Whitney.
Audubon‖	Audubon	1,301	15	60.4	− 2.8	85	11†	32	27	34	5.32	+ 2.18	1.52	0.0	10	13	8	9	se.	Geo. E. Kellogg.
Bedford‖	Taylor		8	65.0		92	12	35	23†	39	5.53		1.25	0.0	12	18	4	8	se.	E. E. Healy.
Charlton‖	Lucas	1,042	13	63.6	− 1.9	90	12	37	23†	36	3.97	+ 0.53	0.95	0.0	8	16	5	9	se.	C. C. Burr.
Clarinda	Page	1,009	18	64.4	− 1.8	94	12	35	27	43	5.59	+ 2.90	1.17	0.0	13	19	1	10	ne.	H. S. Van Sandt.
Corning‖	Adams	1,117	16	63.4	− 1.4	90	12	37	27	35	5.12	+ 2.16	1.55	0.0	7	14	8	8	se.	Jerome Smith.
Corydon‖	Wayne	1,101	15	65.2	− 1.3	90	12	39	27	33	4.99	+ 1.40	2.50	0.0	10	18	4	8	se.	Clara Miller.
Creston	Union	1,312	3	63.2		92	12	36	24†	39	4.25		1.02	0.0	11	16	2	12	se.	Edgar Stovall.
Cumberland	Cass		9								4.14		1.20	0.0	11	22	3	5	sw.	J. H. Reppert.
Denison	Crawford	1,180	13	62.4[a]	− 1.3	88[a]	3	34[a]	24	36[a]	4.43	+ 1.43	0.98	0.0	13	17	7	6	s.	W. C. Van Ness.
Elliott	Montgomery		3	64.0		90	12	35	27	35	5.03		1.85	0.0	9	14	10	6	se.	Henry Barnes.
Hancock‖	Pottawattamie	1,113	2	64.4		91	12	38	24	36	4.90		1.50	0.0	8	14	10	6	se.	G. C. Rogers.
Harlan‖	Shelby	1,192	9	62.2	− 0.8	87	11	36	23	36	7.19		1.55	0.0	10	11	11	8	se.	C. A. Reynolds.
Hopeville	Clarke		17	64.1	− 2.3	89	13	37	27	33	1.83	− 1.66	0.61	0.0	7	12	12	6	s.	M. T. Ashley.
Inwood‖	Lyon	1,474	4	61.7		85	11	34	5	37	4.38		2.53	0.0	11	13	8	9	se.	F. B. Hanson.
Lamoni	Decatur			64.2		90	12	38	27	31	5.75		1.57	0.0	10	17	0	13	se.	T. J. Fitzpatrick.
Larrabee	Cherokee	1,266	17	60.1[b]	− 2.7	83[a]	9	36[b]	23	30[b]	4.87	+ 1.45	1.20	0.0	11	11	13	6		H. B. Strever.
Le Mars‖	Plymouth	1,224	12	60.6	− 1.9	83	11	38	5	28	5.72	+ 1.94	2.25	0.0	12	12	10	8	se.	G. A. C. Clarke.
Lenox‖	Taylor	1,250	13	63.5	− 1.8	90	12	39	23†	47	3.71	+ 0.38	1.00	0.0	8	21	4	5	s.	J. L. Hurley.
Leon	Decatur	1,120	6	64.4		90	12	38	27	31	4.65		2.05	0.0	9	12	9	9	s.	Morris Gardner.
Little Sioux‖	Harrison		4	65.0		92	12	35	24	41	4.62		1.50	0.0	13	13	8	9	se.	Geo. H. Gibson.
Logan‖	do	928	42	63.9	− 0.2	89	11	37	24	41	6.16	+ 2.91	1.39	0.0	12	11	14	5	ne.	Glen H. Stern.
Mt. Ayr‖	Ringgold	1,236	15	65.8	− 0.9	93	12	39	27	35	4.30	+ 0.77	1.25	0.0	11	12	8	10	e.	A. F. Beard.
Odebolt‖	Sac	1,356	10	63.0	− 0.5	90	10	37	24	39	3.19	− 0.56	1.12	0.0	9	15	7	8		E. Starner.
Onawa‖	Monona	1,051	8	65.3		89	12	41	23	40	4.18		0.86	0.0	11	19	2	9	se.	C. G. Perkins.
Pacific Junction‖	Mills	960	9	63.6	− 0.9	92	12	35	24	41	5.88		2.54	0.0	8	12	13	5	s.	H. H. McCartney.
Rock Rapids‖	Lyon	1,358	9																	W. C. Wyckoff.
Sheldon‖	O'Brien	1,422	8	61.0		85	11†	34	23	43	4.12		2.10	0.0	10	14	8	8	s.	Dr. A. W. Beach.
Sibley	Osceola	1,212	15	59.0		85	10	35	23	40	3.72	+ 0.35	1.95	0.0	10	18	3	9	se.	Francis C. Doolittle.
Sioux Center‖	Sioux		9	60.4	− 0.9	84	11	39	23	30	4.33		2.23	0.0	11	14	9	7	se.	J. Deruyter.
Sioux City	Woodbury	1,135	20	63.0	− 1.1	87	12	39	24	33	1.99	− 0.48	0.51	0.0	10	12	10	8	se.	U. S. Weather Bureau.
Thurman‖	Fremont		11	64.6	− 1.2	92	12	37	27	36	7.34	+ 2.55	1.63	0.0	11	10	12	8		C. R. Paul.
Washta‖	Cherokee	1,157	10	61.2		88	10	30	24	44	2.44	− 1.34	0.61	0.0	9	14	9	7	s.	H. L. Felter.
Woodburn‖	Clarke	961	9	62.0		91	12	33	30	44	3.61		1.00	0.0	9	13	7	10	se.	C. B. McDonough.
Kansas.																				
Abilene	Dickinson	1,157	14								2.84	+ 0.03	1.80	0.0	6	13	9	8	e.	J. H. Sherman.
Agricultural College	Riley	1,100	51	68.8	+ 6.6	98	12	34	28	49	5.21	+ 2.10	2.38	0.0	9	20	2	8	sw.	J. O. Hamilton.
Alton	Osborne	1,651	7	68.4		106	11	36	24	49	3.73		1.93	0.0	8	18	8	4	se.	H. A. Storer.
Atchison	Atchison	973	18			94	12				10.86	+ 7.13	3.30	0.0	10	17	7	6	s.	M. F. Troxell.
Baker	Brown	1,182	9	65.4	− 0.8	92	12	36	27	39	7.70		2.30	0.0	8	15	2	13	s.	E. A. Bastien.
Beloit	Mitchell	1,383	14																	W. H. Houghton.
Blakeman	Rawlins	2,894	1	63.9		96	11	26	24	58	1.54		0.84	0.0	4	21	3	6	se.	C. L. Henderson.
Blue Rapids	Marshall	1,105	3																	M. Norton.
Centralia	Nemaha	1,256		66.7		94	12	38	28	40	7.54		2.35	0.0	16	23	0	7	se.	L. E. Hazen.
Chapman	Dickinson	1,123	5	70.3		99	11†	34	27	52	2.30	− 0.58	0.98	0.0	6	19	6	5	s.	R. McShea.
Clay Center	Clay	1,203	8	69.2		100	11	35	27	56	3.63		0.90	0.0	9	14	1	15	s.	O. L. Slade.
Colby	Thomas	3,138	18	65.2	− 0.2	94	2	34	23	48	1.97	+ 0.56	0.70	0.0	8	15	7	8	se.	R. M. Chelf.
Concordia	Cloud	1,398	25	67.7	− 0.4	96	11	40	24	40	6.30	+ 3.72	2.06	0.0	11	13	13	4	se.	U. S. Weather Bureau.
Densmore	Norton	2,200		67.2		99	11	33	24	52	1.60		0.91	0.0	6	13	11	6	e.	F. S. Griffith.
Dresden	Decatur	2,731	15	66.6	+ 0.5	93	11	37	23	42	2.83	+ 0.71	1.06	0.0	7	18	4	8	se.	Jacob Bock.
Ellsworth	Ellsworth	1,537	5	68.6		97	12	38	24	46	3.41		1.60	0.0	8	14	9	7	s.	George Seitz.
Enterprise	Dickinson	1,144	7	70.2		99	11†	35	28	51	1.92		1.12	0.0	6	19	7	4	s.	G. F. Wagner.
Eskridge	Wabaunsee	1,412	3	69.2		94	11†	42	27	33	4.63		2.31	0.0	7	19	6	5	s.	G. D. West.
Farnsworth	Lane	2,850	8	68.1		98	2	36	23†	54	3.06		1.61	0.0	5	24	3	3	s.	C. M. Jennison.
Ft. Scott	Bourbon	857	13	69.6	− 1.8	102	11	31	28	55	1.65	− 1.22	1.51	0.0	3	21	2	7	se.	E. A. Shaver.
Frankfort	Marshall	1,146	15	68.0	− 1.0	98	11†	33	27	46	7.93	+ 4.41	2.58	0.0	10	13	13	4	se.	E. C. Dunham.
Garnett	Anderson	950	3	70.0		100	12	45	22†	45	1.64		0.96	0.0	5	18	12	0	nw.	J. S. McCartney.
Goodland	Sherman	3,687	3																	G. L. Calvert.
Gove	Gove	2,750	20	69.4	+ 1.1	92	2	44	27†	....	3.71	+ 1.47	1.87	0.0	3	19	9	2	se.	Jesse Royer.
Hanover	Washington	1,225	6	69.0		98	11	39	23	46	6.94		2.05	0.0	11	17	7	6	s.	August Jaedicke, jr.
Harrison	Jewell	1,804	8	66.5		96	11	35	24	47	5.43		2.26	0.0	13	21	4	5	n.	Mahlon Tegley.
Hays	Ellis	2,000	21	67.4	+ 6.8	100	11	35	24	48	2.78	+ 6.37	1.38	0.0	4	18	3	9	nw.	G. K. Helder.
Hill City	Graham	2,134	1																	L. R. Mort.
Horton	Brown	1,188	20	67.2	− 1.0	94	12	41	27	34	7.95	+ 4.39	1.80	0.0	9	21	5	4	s.	Mrs. S. C. Belden.
Hoxie	Sheridan	2,700	12	66.8	+ 1.2	96	11	35	23	47	3.56	+ 0.93	0.95	0.0	7	17	6	7	s.	C. T. Dallam.
Jewell	Jewell	1,540	4	67.6		100	11	36	28	50	3.52		2.05	0.0	5	17	9	4	s.	C. A. Shinn.
Lawrence	Douglas	874	12	67.0	+ 0.2	90	12	44	28	27	11.49	+ 7.80	7.49	0.0	12	15	8	7	e.	H. P. Cady.
Lebanon[c]	Smith	1,812	11			88	20	41	28	42	3.55	+ 0.36	1.45	0.0	6	10	1	0	s.	Dr. W. C. Bower.
Lindsborg	McPherson	1,333	3																	J. R. Lynch.
Manhattan	Riley	1,014	19	68.6	+ 0.2	99	11†	36	27†	53	4.37	+ 1.13	1.93	0.0	7	16	1	13	e.	Dr. C. P. Blachly.
Mankato	Jewell	1,784		67.3		97	11	40	23†	44	3.87		1.95	0.0	8	20	6	4	ne.	R. M. Cauthorn.
Minneapolis[a]	Ottawa	1,259	19	68.4	− 0.5	96	11	37	28	43	5.26	+ 2.68	1.75	0.0	9	22	3	5	s.	J. L. Steele.
Moran	Allen	1,098	13	73.8	+ 3.7	103	11	38	27	44	1.11	− 3.07	0.42	0.0	3	23	5	2	sw.	C. J. Norton.
Norton	Norton	2,284	11	67.5	+ 0.9	97	12	33	24	51	3.19	+ 1.90	1.10	0.0	6	19	4	7	se.	H. A. Sleffel.
Oberlin	Decatur	2,539	18								1.96	+ 0.16	0.68	0.0	10	20	7	3	se.	I. K. Huber.
Oketo	Marshall	1,194	1	68.7		96	11†	39	24†	39	6.82		2.48	0.0	10	13	12	5	se.	J. A. Church.
Olathe	Johnson	1,032	14	68.4	− 0.4	95	12	39	27	35	7.62	+ 4.22	2.52	0.0	10	16	6	8	se.	Dr. S. B. S. Wilson.
Osage City	Osage	1,081	9	73.0	+ 2.9	100[a]	11	39	28	42[a]	1.45		0.58	0.0	4	20	4	6	se.	W. C. White.
Ottawa	Franklin	926	15	68.4	− 0.2	98	11	32	28	46	4.22	+ 0.39	2.55	0.0	8	16	11	3	se.	Dr. W. J. Norton.
Phillipsburg	Phillips	1,939	16	68.2	− 0.2	99	11	38	23†	46	3.08	+ 0.31	1.16	0.0	9	17	8	5	ne.	N. E. Bailey.
Pleasanton	Linn	862	7	69.6		97	11	36	28	38	3.54		1.42	0.0	5	23	6	1	se.	B. F. Blaker.
Republic[a]	Republic	1,495	7	65.0		97	11	36	23†	49	6.47		2.80	0.0	7	7	5	7		F. B. Potter.
St. Francis	Cheyenne	3,288	1	65.4		94	11	32	23	52	2.66		1.40	0.0	8	19	6	5	s.	J. E. Uplinger.
Salina	Saline	1,227	24	69.8	− 0.3	100	11†	34	28	48	3.01	+ 0.69	1.74	0.0	7	14	12	4	s.	Prof. A. W. Jones.

TABLE 1.—*Climatological data for September, 1909. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Kansas—Cont'd.																				
Scott	Scott	2,971	3	69.4	.....	99	2	38	27	49	1.58	.....	1.00	0.0	3	17	10	3	s.	J. B. Loughran.
Topeka	Shawnee	997	23	68.8	+ 0.5	97	11	43	27	34	11.48	+ 7.92	8.08	0.0	13	15	11	4	e.	U. S. Weather Bureau.
Valley Falls	Jefferson	913	10	67.4	− 0.1	94	12	41	27†	34	7.41	+ 3.33	2.25	0.0	9	18	6	6	se.	Miss Nettie Maxwell.
Vinland	Douglas	880	....	67.8	.....	95	12	36	27	39	7.56	.....	3.77	0.0	9	16	7	7	se.	A. Schick.
Wakeeney	Trego	2,456	5	68.1	.....	96	11	39	23	40	4.27	.....	1.38	0.0	8	24	0	6	s.	A. S. Peacock.
Wallace	Wallace	3,303	39	67.0	+ 0.2	98	1†	32	29	55	1.41	+ 0.09	1.00	0.0	4	12	16	2	s.	M. T. Griggs.
Wamego	Pottawatomie	1,002	16	.....	.....	.....	.....	.....	.....	.....	7.31	+ 3.85	3.75	0.0	7	16	6	8	n.	M. L. Stone.
Missouri.																				
Albany	Gentry	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. E. Elder.
Amoret*	Bates	850	0	71.2	.....	101	20	37	28	43	3.63	.....	1.54	0.0	5	19	2	8	s.	C. L. Glassmire.
Appleton City	St. Clair	853	18	72.0	+ 1.5	105	11	35	28	49	2.22	− 1.16	0.95	0.0	5	20	8	2	s.	T. C. Brown.
Arlington	Phelps	695	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. W. Andres.
Arthur	Vernon	767	16	70.6	+ 1.9	97	11	31	28	45	3.60	+ 0.02	2.45	0.0	3	13	15	2	ne.	J. T. Armstrong.
Avalon	Livingston	.....	24	67 6	− 1.4	94	12	38	27	33	5.57	− 0.05	1.80	0.0	9	20	6	4	se.	F. G. Ashbaugh.
Bagnell	Miller	594	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. Brockman.
Bethany	Harrison	881	19	63.4	− 3.1	90	13	40	24	36	5.87	+ 2.35	1.55	0.0	9	24	2	4	se.	W. H. Skinner.
Bolivar	Polk	1,070	21	70.6	+ 0.7	102	11†	31	28	45	2.52	− 0.99	1.91	0.0	7	15	12	3	sw.	E. Waltz.
Boonville	Cooper	600	33	.....	.....	.....	.....	.....	.....	.....	4.77	+ 0.39	2.04	0.0	8	17	3	10	se.	C. Randecker.
Brunswick	Charitan	651	30	68.0	− 0.2	94	12	40	28	41	5.98	+ 2.06	1.81	0.0	11	16	5	9	e.	Louis Beneke.
Clinton	Henry	800	7	71.2	.....	100	12	36	28	43	4.07	.....	1.84	0.0	6	23	4	3	e.	Dr. G. W. Menees.
Columbia	Boone	784	18	67.0	− 0.8	94	12	37	28	38	3.09	+ 0.24	2.22	0.0	10	14	9	7	se.	U. S. Weather Bureau.
Conception §	Nodaway	982	24	66.0	− 0.8	92	12	41	27	33	4.65	+ 1.39	1.16	0.0	8	15	11	4	se.	Fr. Adhelm Hess.
Darksville	Randolph	826	18	66.7	− 2.1	92	12	40	27	31	7.13	+ 3.46	2.70	0.0	7	18	4	8	e.	W. H. Broadelus.
El Dorado Springs	Cedar	750	3	72.2	.....	105	11	33	28	46	2.63	.....	2.25	0.0	4	18	8	4	n.	Samuel Graham.
Fairport	De Kalb	920	15	.....	.....	.....	.....	.....	.....	.....	6.62	+ 2.44	2.70	0.0	8	20	3	7	sw.	J. W. Lincoln.
Fayette §	Howard	725	26	65.8	− 3.2	91	12	36	28	36	6.25	+ 2.07	3.56	0.0	9	17	5	8	.....	T. Berry Smith.
Fulton**	Galloway	818	18	63.8	.....	96	13	33	27†	44	0.65	.....	0.36	0.0	5	11	2	2	.....	Mrs. Ruth McKinney.
Gallatin	Daviess	803	16	.....	.....	.....	.....	.....	.....	.....	5.29	+ 1.11	1.30	0.0	11	22	5	3	n.	Dr. W. P. Young.
Glasgow	Howard	618	30	.....	.....	.....	.....	.....	.....	.....	6.16	+ 2.27	2.92	0.0	7	18	5	7	e.	J. J. Shaughnessy.
Grant City	Worth	1,130	17	65.4	.....	92	13	42	24†	33	5.22	+ 1.56	0.94	0.0	11	20	1	9	nw.	W. H. Campbell.
Harrisonville	Cass	912	37	68.3	0.0	96	12	36	28	40	8.46	+ 4.34	3.92	0.0	10	17	2	11	e.	A. J. Sharp.
Hazelhurst	Livingston	.....	16	.....	.....	.....	.....	.....	.....	.....	3.93	+ 0.06	0.83	0.0	9	.....	.....	.....	.....	W. H. Baker.
Hermann	Gasconade	482	35	.....	.....	.....	.....	.....	.....	.....	5.88	+ 2.16	4.10	0.0	8	15	7	8	e.	C. T. Maushund.
Houston	Texas	1,280	17	68.7	+ 0.1	101	3	31	28	44	3.83	+ 0.03	1.58	0.0	6	11	16	3	s.	E. Dempsey.
Huntsville	Randolph	790	6	.....	.....	.....	.....	.....	.....	.....	7.00	.....	3.00	0.0	6	.....	.....	.....	.....	F. H. Hammett.
Jefferson City	Cole	628	27	68.1	− 1.0	98	12	33	28	44	2.35	− 0.48	1.42	0.0	6	21	4	5	n.	Miss Emma Swift.
Kansas City	Jackson	963	21	68.8	+ 1.3	95	12	46	27	26	6.78	+ 3.02	2.38	0.0	13	17	7	6	se.	U. S. Weather Bureau.
Kidder	Caldwell	1,017	16	66.6	− 0.7	92	12	41	27	30	7.28	+ 3.50	2.05	0.0	12	19	4	7	se.	J. F. Sharp.
Lamonte	Pettis	863	21	68.4	.....	99	12	33	28	43	3.47	− 0.44	1.56	0.0	8	19	7	4	nw.	J. R. Wade.
Lebanon	Laclede	1,265	20	70.4	+ 0.4	98	4	37	28	38	1.26	− 2.56	0.50	0.0	7	15	7	8	ne.	M. W. Serl.
Lexington	Lafayette	813	27	67.6	− 0.7	95	12	39	27	36	12.04	+ 8.10	4.48	0.0	9	20	0	10	s.	J. W. Keithley.
Liberty	Clay	864	21	68.7	− 0.4	96	12	99	28	37	9.51	+ 6.12	3.35	0.0	8	21	8	1	se.	J. W. Kyle.
Lockwood	Dade	1,088	14	73.0	.....	101	3	39	27	43	1.98	− 1.61	1.77	0.0	4	17	7	6	se.	C. S. Crow.
Marshall*	Saline	779	18	67.6	− 0.9	95	12	34	28	39	5.60	+ 1.74	1.84	0.0	9	19	6	5	sw.	W. H. Black.
Marshfield	Webster	1,492	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. J. P. Keller.
Maryville	Nodaway	1,160	19	65.2	− 0.7	93	12	40	27	36	5.00	+ 1.53	1.02	0.0	11	19	2	8	s.	J. R. Brink.
Mt. Vernon	Lawrence	1,480	33	71.6	+ 0.3	100	11	34	28	41	3.30	− 0.22	2.25	0.0	6	15	14	1	se.	Dr. O. H. Brown.
Nevada	Vernon	869	15	.....	.....	.....	.....	.....	.....	.....	2.84	− 1.02	1.42	0.0	5	23	7	0	sw.	C. Jewell.
New Palestine	Cooper	795	17	69.4	− 0.9	98	12	41	27†	40	2.72	− 1.49	1.45	0.0	5	20	7	3	sw.	A. I. Zeigle.
Oregon	Holt	1,113	54	65.1	− 2.0	90	12	40	27	32	5.86	+ 2.44	2.16	0.0	10	20	2	8	se.	Tom Curry.
Osceola	St. Clair	738	9	.....	.....	.....	.....	.....	.....	.....	4.92	.....	4.17	0.0	7	23	3	4	sw.	W. E. Matthews.
Parkville	Platte	.....	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. A. D. Wolfe.
Rolla	Phelps	1,092	28	69.2	.....	97	3	39	27†	35	2.71	− 1.09	0.84	0.0	8	16	7	7	se.	Prof. P. J. Wilkins.
St. Charles	St. Charles	614	31	68.2	+ 2.1	95	3	39	27†	33	3.76	+ 1.08	1.39	0.0	6	15	7	8	s.	L. C. Saeger.
St. Joseph	Buchanan	825	37	69.6	.....	95	12	41	27†	38	5.96	+ 2.96	1.86	0.0	13	19	7	4	e.	Grant Forbes.
St. Louis	.....	567	39	68.3	− 1.7	92	3	43	27	29	4.22	+ 1.31	1.70	0.0	8	16	7	7	se.	U. S. Weather Bureau.
Sublett	Adair	1,000	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Erres Spriggs.
Trenton	Grundy	812	14	66.2	− 1.1	89	12	42	28	31	4.12	+ 0.72	0.90	0.0	9	24	0	6	se.	J. H. Flesher.
Unionville	Putnam	1,072	16	65.2	− 2.5	92	12	35	27	35	5.05	+ 0.63	1.54	0.0	10	14	3	14	s.	Geo. W. Davis.
Versailles	Morgan	1,021	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warrensburg	Johnson	883	30	69.9	+ 0.2	97	12	40	27	36	4.30	+ 1.15	1.80	0.0	8	18	8	4	sw.	Prof. S. F. Prince.
Warrenton	Warren	865	19	67.4	− 1.4	94	13	37	27	36	5.53	+ 1.96	3.04	0.0	7	16	3	11	s.	John H. Frick.
Warsaw	Benton	700	5	71.4	.....	101	12	28	26	52	7.59	.....	2.62	0.0	10	15	13	2	e.	Dr. J. R. Smith.
Wheatland	Hickory	920	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. S. A. Jackson.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 6, Missouri Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																	
Arapahoe	Big Horn	.03	.05				.15	.07				.11										.03	.10									0.57
Barnum	Powder	.20			.75							.30										.32										1.57
Basin	Big Horn	.07			.11								.18																			0.36
Bennett	North Platte	.03		.03	.25	.23	.65					.25									.23	.01										1.73
Cheyenne	South Platte	.13	T.	.52	.37	.07	.13	.01	T.		.07		T.					T.	.04			.03										1.37
Cheyenne Exp. Farm	...do																															
Chugwater	North Platte	.50	T.	T.	.10	T.																										0.60
Clark	Clark's Fork	.41	.04	.19	.02			T.	T.		.02	.18	.21					T.			.30	.23	T.							.09		1.69
Crystal Lake Reservoir	South Platte	T.		T.	.40	.20	.40											T.	T.	T.		T.										1.00
Douglas	North Platte	.06			.58	T.							.26		.02						.45											1.37
Dubois	Big Horn	.74		T.		.33	.10	T.			.10	T.																		T.		1.27
Eaton's Ranch	Tongue	.11	.05	.59	.95			T.					.65		.12							.45										2.92
Echeta	Powder			.75								.80		.10								.52										2.17
Elk Mountain	North Platte	.09			.11	.15	.42	.06	.02				.02									.53										1.40
Encampment	...do	.01			.15	.41	.46	.12	.01		T.		.24								.26	T.										1.66
Ervay	...do	.21			.90	.59	.18	T.				.22							T.			.20				T.						2.30
Filmore	...do				.49	.43	.55	.25												.09												1.81
Fort Laramie‖	...do	.15	.03	.58	.03	.03		T.		T.			.03									.24	.04									1.13
Gillette	Powder	T.	T.	.73	.35	T.							.67	.10	.02							.12	.15									2.14
Granite Canyon	South Platte	.01	T.	T.	.53	.13	.15	.06			T.			T.					T.				T.									0.88
Hunter's Station	Powder	.09							.09			.26	1.10	.04	.16				.11		T.	.18	.08									2.11
Hyattville	Big Horn																															
Independence	North Platte	.40		T.	.01	.05	.16	.31	.18			.15										T.										1.26
Kaycee	Powder																															
Kirtley	Niobrara	.38			.24	T.		.16	T.													.17	.09									1.04
Kirwin	Big Horn	.50		.02	.12		T.	.25	.05		T.	.30	T.								T.	.08										1.32
Knowles	Belle Fourche	.53	.48	.04	.43			.03					.75		.08							.37	.15									2.86
Lander	Big Horn	.28			.08	.28	.01	.01				.04						T.			.03	.03						T.				0.76
Laramie	North Platte				.68	.32	.32					.07									.18											0.97
Leo	...do	.12		.08	.06	.08	1.01	.20	.05			T.	.23									.20										2.03
Lolabama Ranch	Clark's Fork	.70			.15	.10		.10				.10		.10						.05	.22		.10									1.62
Lovell	Big Horn	.13	.01									.19	.43	.08	.10							.08										1.02
Lusk‖	Niobrara	1.00		.25				.50																								1.75
Luther	South Platte	.31	.18		.14	.14		.76														.16										1.69
Manville	Niobrara	.70		.10				.07				T.	.22									.28	.02									1.39
Moorcroft	Belle Fourche																															
Moore	North Platte	.16		.06	.11	.03	.27	T.					.20									.05	T.									0.88
Newcastle	S. Fork, Cheyenne	1.02	.22	.17	.18	T.	T.					T.	.03						T.			T.	T.							T.		1.62
Pathfinder	North Platte																															
Phillips	...do	.76			.33	.15	T.	T.										T.					.25									1.49
Pine Bluff	South Platte																															
Powell	Big Horn	.23											.25	.13								.08										0.69
Riverton	...do																															
Saratoga	North Platte	.01			.12	.29	.26		.14		T.	.30							T.		.13	T.										1.25
Sheridan, (1)	Tongue	.02	.01	.57	.27							.49	.14		.06			.03			.05	.05	T.									1.69
Sheridan, (2)	...do				1.04							10	.60																			1.74
Shoshone Dam	Big Horn	.26	.02		.16	.02		.02	.28			.03	.01								.03	.06										0.89
Soldier's Home	Powder	.07	.02	T.	.44			T.	.13			T.	.91		.05							.18	.06									1.86
South Pass City	North Platte	1.49	T.	.10		T.	.27	.05	T.	.02	T.	T.	T.					T.				.02										1.95
Thermopolis	Big Horn	.25		.15								.28	.06	.01								.45	.02									1.22
Upton	S. Fork, Cheyenne	1.00	.50	T.		T.	.30	.13		.30	1.60	T.	1.03									T.										4.86
Valley	Big Horn	.36	.03	.15		.09		.06			.34										.10	.15								.07		1.35
Verona	Tongue			1.23								1.11		.21								.21										2.76
Wiley	Big Horn	.15	.02	T.	.23	T.	T.		T.		T.		.16	.10								.20	T.									0.86
Wyncote	North Platte	T.	.30	T.		T.		T.													.30	T.										0.60
Yellowstone Park	Yellowstone	.81	.06	.16		.20	.13	T.	T.		.01	.30	.61	.01							.01	T.	T.			T.			.01	.14		2.45
(1) Fountain	Madison	1.10	T.	.14	.36	T.	.22	.31			.37	.30								T.	.41	.10								.20		3.51
(2) Grand Canyon	Yellowstone	.80	.16	.14	.13	.70	.15	.05	.07		.06	.26	.28		.09							.05	.03							.25		2.62
(3) Lake Yellowstone	...do	.52	.12	.03			.19	.18	.03		.03	.20	.16		.03						.02	.04							.05	.15		1.75
(4) Norris Geyser B.	...do	.40		.10		.10	.52		.10		.10	.20	.30	.10																		1.92
(5) Riverside	Madison	.76	.04	.14		.08	.17	.31				.37	.23		.05						.12								.13	.34		2.74
(6) Soda Butte	Yellowstone	.20		T.			.10	.15					T.	.05							T.	.80	T.							.21		1.51
(7) Sylvan Pass	Big Horn	.40	.47		.15		.65	.72			.15	.40	.43					.10			.32									.30		4.09
(8) Thumb	Yellowstone	.76	.25	.11	.14	.04	.40	.14	.08			.41	.20																	.10		2.63
(9) Tower Falls	...do	.05	.10			T.	.21	.06	T.		T.		.06	.05																.06		0.59
(10) Up. Geyser Basin	Madison	1.20			.50			.80																								2.50
Montana.																																
Adams	Yellowstone			.08	.29						.05		.10						.10		.08	.02	.05									0.77
Adel	Missouri	.41	.28	2.70	.17						.15	.60	.67	.04				T.			.15	.27	T.			.03			T.	T.		5.47
Agricultural College	Gallatin	.58	1.00	.78	.29	T.	T.	.51	T.		T.	.62	1.03	.11	.05			.33		T.	.03	.06								.15		5.54
Augusta	Sun River	.30	.54	1.65							T.	1.18	.03									T.										3.70
Babb‖	Milk River			.37					.73	.27									.23													1.60
Bald Butte	Missouri	.12	.32	1.38	.11						.13	.53	.18								.15	.01	T.						.16			3.09
Big Creek	Yellowstone	.77		.58		.03		.64				.65	.71									.54								.22		4.14
Billings	...do	T.	.18	.14	.06							.03	.13	.25									T.									0.79
Boulder Nursery	Jefferson	.19	.18	.73	.07			T.			.26	1.06	.55					T.			T.	T.	T.						T.	1.80		4.84
Bowen	...do	.23	.26	.28		.26	.25	.10				.89									.05								.45	T.		2.71
Bridger	Yellowstone	.24		.49								.20	.35																	.20		1.48
Broadview Exp.Stat'n	...do	.65	.14	.35	.09				.05			.34	.21	.02			T.													T.		1.85
Browning	Marias			T.								T.	T.	T.																		T.
Busby	Yellowstone																															
Busteed	...do	.10	.54	.45	.07			.03				.55	.41	.03				T.			T.	.06								.40		2.64
Butte	Jefferson	.45	.60	.10		.25		.10			.60	.65	T.					T.	T.	.05							T.		.05	T.	.40		3.25
Canyon Ferry	Missouri	.10	.18	.33	.03						.38	.10	.51	.10									.14							.03	T.		1.90
Cascade	...do																															
Cataract Creek‖	Jefferson	.56	.44	.85			.23			.63	.78	.03			.04					.07	.09									.02			3.74
Chessman Reservoir	Missouri	.40	.75		.60				T.		.30	.85	.50					T.				T.								.06		3.46
Chester	...do																															
Chinook	Milk River																															
Chouteau	Missouri			.60								.70																				1.30
Clear Creek	Milk River			T.							.15	.46	.34					.27	.02		.05		.11							T.		1.40
Clemons	Missouri	.95	.23	1.98							T.	.78	T.																T.	T.		3.94
Columbus	Yellowstone																															
Copper	Musselshell	.80	.05	.30	.08							.08	.04	.01				.30			.07	.03	T.							T.		1.76
Crow Agency	Big Horn	.15		.09	.19				.09			.17	.31																			1.00
Culbertson	Missouri																															
Cut Bank	Marias											T.		.65				T.				.45	T.						T.			0.50
Decker	Tongue			2.00	T.	T.						T.																				2.00
Deep Creek	Missouri	.82		.12									1.90										.45							.15		3.44
Delphine	Musselshell		1.40	1.60				.10			.55	.23	.05	T.				.15		.20	.02	.62	T.	.01					T.	.10		4.43
Denton	Missouri	.36	T.	.64							.10	.64	.30				.25					1.07	.02							.20		3.58
Dillon	Jefferson		.31	1.07		.15	.09	.48			.08	1.31	.26					.35			.03	.01				T.			T.	T.		4.14
Dirty Creek	Musselshell	.72	.46	.35	.03			.02			T.	.60	.08				.25		.13	.12	.02									.14		3.92
Dry Creek	Missouri																															

TABLE 2.—*Daily precipitation for September, 1909. District No. 6*—Continued.

Stations.	River basins.	Day of month																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Montana—Cont'd.																															
Dry Wolf Camp	Missouri																														
E. Gallatin River	Gallatin	.46	.62	1.14	.20				T.			.50	.92	T.					.08		.12	.11	.05								4.20
Ekalaka	Little Missouri	.18	.40					.05	.10				.48									.18	.17								1.56
Elkhorn	Jefferson	.25	.02	.05							.10	.22	.10					T.			T.	.02	.01	.21			T.			T.	0.79
Evans	Missouri																														
Fallon	Yellowstone	T.	.67	T.										.20				T.			T.		T.								0.87
Family	Marias											T.																			T.
Fish Creek	Jefferson	.29	.48	.32	.16		.13	.20			.16	.30	1.23							.01	.61							T.		.30		3.59
Fish Tail Creek	Yellowstone	.35	.20	.46	.83			.26	.14			.40		.30	.01						.02	.06									.05	3.08
Flathead Creek	...do	.75	.25	.44								.70	.70					.46			.10	.66									.40	4.46
Forsyth	...do		.50	.20								.51	.01	.10																		1.32
Fort Benton	Missouri			.10							.35	.56	.15						.35		.30											1.75
Fort Shaw	Sun River	.48	.17	.60	T.						.04	.19	T.					T.			T.	T.	T.						T.	T.		1.48
Foster	Big Horn	.16	.01	.63				T.	T.			.40	.15	.04								T.	T.								.06	0.85
Garneil	Musselshell	1.25	T.	.22			T.				.09	.55	.45					.22			T.	.39	.C7					T.		.15		3.39
Glendive	Yellowstone		.15	.55																												0.70
Goldbutte	Marias			T.							.10										.01	.05	T.									0.16
Graham	Powder	.15	.14	.18								T.	.75		.18				.22			.04										1.66
Grayling	Madison	.90	.05	.23	T.	.53	T.	.28	T.		.07	.27	.24		.07															.20	.24	3.08
Great Falls	Missouri	.16	.31	.97							.21	.61	.18					.08			T.	.26	.07									2.85
Half Moon Pass	Musselsheli	1.30	.C5	1.05				.08			.06	.86	.32	.07				.05	.02		.17	.30	.05								.96	5.34
Half Way House	Missouri	.49	.20	.10				.09			.11	1.37	1.79	.29				.33			.13	.47	.37								.07	5.81
Harlowton	Musselshell																														
Hassel	Missouri	.48	.59								.40	.64	.66					.11			.11									.12		3.11
Havre	Milk River			T.							.25	.23	.22	.03				.12	.05		.01	.02	.01							T.		0.94
Helena	Missouri	.19	.11	.54				.02			.70	.44	.07					T.			.04		T.						T.	.03		2.14
Highwood	...do	.C6	.23	1.41	.01						.65	1.02	.10	.C3	.07			.22	.11		.22	.60							.01			4.74
Homepark	Jefferson	.55		.25			.30					.67	.75																			2.52
Huntley	Yellowstone					.10							.15	.55																		0.80
Jones Canyon	Gallatin	.10	.30	.70	T.	T.	T.	.11			.60	.24	.77	.12	.27			.33	T.	.C6	.07	.30	.09						T.	.28		4.34
Jordan	Missouri			.10																		.30										0.40
Kleinsmith Creek	Jefferson	.21	.23	.42				.02	.07		.05	.53	.18					T.			.19									.15	.32		2.37
Lewistown	Missouri	.47	.62	.85	.05						.52		.27					*	.22		.01	.16	.50							1.16		4.23
Livingston	Yellowstone	.82	.03	1.66	.02	T.	T.	.02			T.	.78	.71		.06			T.			.05	.02								.13		4.30
Lodge Pole Creek	...do																														
Lone Tree	Missouri	.12		1.00							.12	.60	.37					.05				.70								.12		3.08
Lost Horse Creek	Musselshell	.54	.45	.90	.05	T.		.44	T.		.01	.54	.15	.61				.09		T.	.25	.02	T.							.03		3.48
Lubec	Marias													*	.15			T.	.01		.01	.01	T.							T.		0.20
Malta	Milk River			.02																												
Meadow Creek	Madison	.07	.05	.04								1.50						.25										.05		.10		2.06
Melstone	Musselshell																														
Mildred	Yellowstone	.27	.19	.07							.08	.17						.03	.07			.02	.22	.34		T.						1.46
Miles City	...do	.40	.25	.06								.25		.04	.01			T.			T.	T.	.10									1.11
Mill Creek	...do																														
Moore	Missouri		.42	.91	.06							1.10	.59	T.						T.		.50	.13								.60	4.31
Mudd Creek	Jefferson																														
Norris	Madison	.60	.75	.57	.17							.95	1.00	T.				.20													.30		4.54
Nye	Yellowstone	.34	.19	.38	.52			.03	.02			.38	.12		.03						.15							.01	.01		.21		2.69
Olsen Creek	Jefferson	.21	.27	.21		.04			.02		.06	.48	.50					.04			.19	.95							.03	.01	.42		3.43
Pipestone Pass	...do																														
Poplar	Missouri										T.		T.						T.			.22										0.22
Raymond	...do		.20	.10								.65						T.	T.		T.	T.										0.95
Reber's Ranch	Yellowstone																														
Red Lodge	...do	.52	.15	.81	.62			.01			.04	.21	.64	.05	.04						.20	.03								.19		3.51
Reese Creek	Gallatin	.58	.26	.40	.10						.60	1.20	.60					.38			.10	.32										4.54
Renova	Jefferson	.35	.27	.22	.05		.09	.13			.02	1.50	.42					.12			T.									.18		3.35
Rimini	Missouri																														
Ryegate	Yellowstone	1.00		.48				.10				.50	.78								.10	T.								.34		3.30
Sedan	...do	.63	.48	.20	.20						T.	.60	.45	.02				.32			.14	.08								.06		3.18
Springbrook	...do	T.	.07	T.							.12	T.	T.	T.	.27				T.		.31	.02	.32									1.11
Stearns	Missouri	.67	.26	3.32	.05							.85									T.									T.		5.15
Toknall	Yellowstone	T.	.12	.05								.06	.18						.10	.11		.10										0.72
Toston	Missouri																														
Townsend	...do		.54	.33	.39							.46	.95	.10																		2.77
Trail Creek	Yellowstone	.59	.13	.60	.07		.09	.08	.01			.77	.81	.23				20			.27	.26	.05								.12		4.28
Utica	Missouri	1.30	.15	.86	.14			T.				.84	.18					.18			.06	.36				T.		T.			.20		4.27
Valentine	Musselshell		.13	.50	T.						T.	.25	.01	.02	.16			T.			.09	.08										1.24
Virginia City	Jefferson & Madison	.42	.12	.34	.02	.15	.13	.03				.87	.64					.16			.05	.06								.05	.13		3.17
Wall Rock Mountain	Missouri	.55	.20	.18	.03						.09	.89	.70					.20			.20	.60	.10									3.74
Warm Springs Creek	Madison	.62	.02	.40	.05		.59	.04			1.23	.09	.05	.01				.20			*	.08						.03	.05		.36		3.82
W. Rosebud Creek	Yellowstone	.30	.22	.40	.79			.20				.26	.25								.03										.18		2.63
Willow Creek	...do		.90	1.30		.14		.07				.42	.55									.45									.16		3.99
Wolf Creek	Missouri	.14	.07	2.30	.10						.11	.32	.11								T.	.21								.09			3.45
Wolf Point	...do																															0.00
Woodville	Jefferson	.22	.45	.11				.15	.03		.17	.74	.42					T.			.07	.05	T.					.03		.04	.36		2.84
North Dakota.																															
Aplin	Knife		.35	.22								.07	.03		T.				.10		.10		.01	.03								0.81
Beach	Little Missouri		.32	.43	.02						T.		.35		.05						T.	T.	.03									1.20
Berlin	James																														
Berthold Agency	Missouri																														
Bismarck	...do	.01	.51	.19									.01																	T.		0.83
Broncho	Knife		.50	.17	T.							T.	.11						.15			T.	T.									0.93
Buford	Missouri										.10	.23	.10		.04				.02		.07		.10									0.66
Coal Harbor	...do		.17	.15	.04								.03									.19		.23								0.81
Dickinson	Heart		.42	.07	.08						T.		.09						.05	.04		.05	.01	.02								0.83
Edgely	James		.05									.25			.05								.07									0.89
Ellendale	...do																														
Epping	Missouri			.39								.15	.22	.09							.17		.09									1.11
Fullerton	James		.54												.12																	0.66
Haley	Grand																														
Hettinger	Cannon Ball																														
Howard	Missouri			.03								.03	.04	.04					.02		.04	T.	T.									0.20
Jamestown	James		.34	.06								.12			.07								.14	.10								0.83
Kulm	...do																														
Lamoine	Missouri			T.								1.32		T.					.15				T.	.13								1.60
Lamoure	James		.24	.22												.08																0.54
Manfred	...do		T.	T.									.22		.05				.05													0.32
Marmarth	Little Missouri	*	.72	T.				T.	.10				.49		.04				.13			.04		.03								1.55
Marstonmoor	James		.41	T.								T.	T.		T.				T.				T.	T.								0.41
Medina	...do																														
Medora	Little Missouri		.35	.20									.50						.05													1.10
Melville	James		T.									.48		.48	T.				T.													0.96
Mott	Cannon Ball	*	.98	.03									.05		.03				.16													1.25
Napoleon	Missouri		.80	.10											T.				T.				T.									0.90

TABLE 2.—*Daily precipitation for September, 1909. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
North Dakota—Cont'd.																																	
New England	Cannon Ball		1.25	.18								.25							.18				.18									2.04
New Salem	Heart		.60	.10									.05		T.				.10			T.	T.									0.85
Orange	Cannon Ball	.19	.33	.23	.03								.03		T.				.08		T.	.28	.03									1.20
Palermo	Missouri																																
Steele	...do		.62										T.		T.		T.					T.	T.	T.								0.62
Swartwood	Grand	.09	.98	.04	.10			T.	T.		.41		.14		.02				.09		T.	.08		.02								1.97
Washburn	Missouri	T.	.30	.30									.44						.07				.16									1.27
Williston	...do			.46							.10	.02	.15	.06					T.	.01	.19	.02	.04	.02								1.07
Wishek	...do		.80																													0.80
South Dakota.																																	
Aberdeen‖	James		.50	.60	.12							.25				.10						T.	.45	.03								2.05
Academy	Missouri	.17	.25			.04							.06								T.	.13	.01									0.66
Alexandria	James	1.34																			.35	.08										1.77
Andover	...do		1.08									.58			.12							.95										2.73
Ardmore‖	Cheyenne	.45	T.			T.				T.											T.											0.45
Armour	Missouri	.70	.06			.06					.15											.05										1.02
Ashcroft	Little Missouri	.76		.26	T.							.41							T.			.09	.08									1.60
Belle Fourche	Cheyenne	.22	.09	.02	.33			.02	.05				.14		.04				.04			.10	.01									1.06
Bowdle	Missouri		1.13		.40					.06			.07								.05	.04										1.75
Brookings	Big Sioux		.19		.09							.01	.11		.04				.02			1.31										1.77
Burke	Missouri																																
Canton	Big Sioux			.70								.21	1.72	.05	.07				.33			.17										3.25
Cascade Springs	Cheyenne	.54			.10			.38		T.												.23										1.25
Castlewood	Big Sioux		.27	.03	.22	T.						.01			T.	T.			.16		.08	.24	.01	T.					T.			1.02
Centerville	Missouri		.95	.01		.02	.07			T.		.36	3.79						.20		.04	.41		T.								5.85
Chamberlain	...do	T.	.25			T.									T.						.41											0.66
Clark	James		.32	.02	.04				T.			.07		T.	.05				.08		.04	.30	.04									0.96
Clear Lake	Big Sioux																																
Clifton	Missouri																				*	.11	.06									1.13
Cottonwood	...do	.40	.29		.02			T.	.18				.04							.10	T.	.30										2.30
Daviston	...do	.14	1.00	.70					.06													.45	.05									2.80
Deadwood	Cheyenne	.30	.10	.05	1.50			T.					.10		.05				.20				.60									1.05
De Smet	James		.45																			.10	T.									0.78
Dowling	Cheyenne	.18	.23		.05				.03		.19		T.										.08									1.67
Dumont	...do	.52	.10	.11	.28			.07			.09		.12						.11			.19										
Elk Point	Missouri																																
Ellingson	...do																																1.92
Englewood	Cheyenne	.50		.67									.13	.07					.13			.33	.09									1.25
Eureka	Missouri		1.04	.06	.04							.02			.05							.04										0.68
Fairfax	...do	.22	.25	.18		.01						.02																					
Farmingdale	Cheyenne																																1.51
Faulkton	James		.72		.56										T.							.23	T.									1.54
Flandreau	Big Sioux		.32							.04		.45	.15		.03				.35			.20										1.19
Forestburg	James		1.06	T.	T.									T.	T.						T.	.13										1.50
Fort Meade	Cheyenne	.30	.10		.80			.10					.10										.10										1.19
Frederick	James		.87	.12								.09											.11									1.13
Gannvalley	Missouri		.65																		T.	.48										3.34
Greenmont	Cheyenne	.52	.21	.13	.76		T.	.05				T.	.23		.04				.19			.35	.26	.60								1.12
Greenwood	Missouri	.74				.11				.02		.25										T.										2.61
Hardy Ranger Station	Cheyenne	.89	.11	.03	T.			.05					.78		.05							.58	.12									1.05
Hermosa	...do	.60		.25				T.	T.						T.			T.				.14	.06									1.70
Highmore	Missouri		1.36	T.	.10			T.							.01							.23		T.								1.16
Hill City	Cheyenne	.28	.22	.07	.39						.03		.07		.02							.08										1.38
Howard	Big Sioux		.55	.04					.04	T.		T.		T.	.02				.11		.10	.52										1.74
Howell	James	T.	1.11		.07	T.		T.							T.						T.	.50	.06	T.								1.38
Huron	...do		.67	.01	.04			T.				T.		T.	.01						.30	.34	T.	.01								0.48
Ipswich	...do		.48												T.							T.										
Kadoka	White																																0.77
Kennebec	Missouri		.45																			.32										0.80
Kidder	James		T.												T.							.80										0.96
Kimball	Missouri	T.	.69												T.							.27										2.36
La Delle	James																																0.29
Lead	Cheyenne	.42	.24		1.03								.14		.04				.52			.34	.03									0.90
Lemmon	Missouri														.03				.03			.23										1.63
Leslie	Cheyenne		T.						.90				T.																			1.46
Marion	Missouri		.61			T.		T.		.28			.24	.11		T.			.28					.11								2.26
Mellette	James		.54	.04	.39			T.				.17			.01				T.		T.	.31	T.									1.87
Menno	...do	T.	.84			T.				.17		.36			T.	.16			.64			.09		T.								0.63
Mitchell‖	James		1.40																		.40	.07										1.13
Murdo	White		.20							.15												.28										2.61
Orman	Cheyenne	.38	.19		.38										.07				.05			.06										1.19
Ottumwa	Missouri	.16	1.50								.58											.37										1.22
Pierre	...do	.29	.26	.32	.09			T.				.01										.22										1.11
Plankinton	James	*	1.17			.03			.02						T.						T.	T.										1.66
Pollock	Missouri		1.10	.01																												1.56
Rapid City	Cheyenne	1.06		.32	.21			T.	T.		T.		T.		T.			T.	T.		.01	.06	T.									1.07
Redfield‖	James		.35	.11	.25																	.15	.70									
Rosebud	White	.93	T.		.05	.03									T.				T.			.06	T.									2.52
Roslyn	Big Sioux																																
Running Water	Missouri		.29				.13					.46	1.64																			2.08
Savoy	Cheyenne	.17	.12		.69	T.			.09	T.			.20		.06				.16			.39	.18	.02								1.19
Selby	Missouri	*	.92	.27							T.				T.							T.										2.00
Sioux Falls	Big Sioux		.90	T.	T.	.10				.15		.10	.50	T.	T.				.20			.05										
Spearfish	Cheyenne																																
Stephan	Missouri	T.	.90		.11			T.				T.			T.							.23	T.	T.								1.24
Tama	Cheyenne																																
Vale	...do	.30	.39		.50			.05					.08						.13			.16										1.61
Van Metre	Missouri																																
Vermilion	...do	T.	1.44			T.	.39			.03	T.	.80	.10	.07	.19	.02			T.	.70	.02	.17										3.93
Water's Ranch	Cheyenne	.31		*	1.05			.20				.25	.26	.03								.27	.04									2.41
Watertown	Big Sioux		T.												T.				T.		.25	.25	T.									0.50
Wentworth	...do		.36	.06						.27		.17	.12		.03				.12			.24										1.37
Wessington Springs	James																																
White Lake	...do	T.	.70																														0.70
Yankton	Missouri	.12	1.34			.05	.11	T.		.09		1.66	.12	.07	T.				.03			.08	T.									3.67
Minnesota.																																	
Pipestone	Big Sioux		.34									T.	.22						.51	T.												1.07
Colorado.																																	
Akron	Republican	.72	.74	.41	.25		.05							.53																			2.70
Alma	South Platte				1.04	.18	1.30			.20		.03	*	.22					.01														2.98
Arriba	Republican			.28	T.	.53							T.	1.70																		2.51
Auldhurst	South Platte	.15	.02	T.	.60	.61	.52	.05	.01	.22	.42		.25	3.01										.25									6.11
Barker	...do																																
Boreas	...do	.10		06	.65	.68	.60	.32			.18			.66							16												2.81

TABLE 2.—*Daily precipitation for September, 1909. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado—Cont'd.																																	
Boulder	South Platte			T.	3.05	.37	.55	.13	T.				.41					T.														4.51
Burlington	Republican																																
Cassells	South Platte																																
Castle Rock	do			.30	.70	.45	.05	.31	.03	.50			.58	.70					T.				.36									3.98
Cheesman	do	.04		T.	.15	.47	.64	.24	T.	T.	.22		.82	.85									.15									3.58
Cheyenne Wells	Smoky Hill				.10	1.72			.18	T.			T.	.93																		2.93
Como	South Platte			.05	1.61	.22	1.42		.08	.39			.10		.43																	4.30
Cope	Republican	.03		.04	.30	.05												.36	.30	.03	.06											1.17
Corona‖	South Platte	.30	.04		.12	.38	.20	.76	.20	.10	.10		.04	.74	.12			.04				T.	.44									3.58
Denver	do	T.	T.	T.	1.94	.25	.26	.14	.03	T.			.82	.10				T.	.02			.18	.04									3.78
Edgewater	do				1.45	.25	.40	.12						1.15				.02														3.39
Estes P'k Fish H'y	do		.07	.03	.28	.09	.52	.40		.08	.03		.06									T.									1.56
Fort Collins	do		.26		.95	.17	.11	.14	.01		T.		.46																			2.10
Fort Morgan	do																																
Frances	do	.05			.80	*	.65	.30		T.			.46	T.				.03	.02			.03	.02									2.36
Fry's Ranch	do	.04			.22	.09	.25	.38	.01		.02											.07										1.08
Georgetown‖	do			.03	.56	.01	.60					T.	.76	.16			.08	T.														2.14
Greeley	do	.05		.30	.23	.06	.14		.18				.46																			1.42
Hartzel	do	.02		1.10	.03	.74	.40			.01	.22	.02	.16	.15	.02				.02													2.89
Hawthorne	do	.19			2.70	.21	.50	.22	.11				.47	.21									.05									4.66
Holyoke (near)	do																																
Idaho Springs	do				.90	.10	.30	.50	.05				.95	.15				.11															3.06
Keota	do																																
Kossler	do																																
La Porte	do				1.10	.35	.12	.32					.37																			2.26
Le Roy (near)	do	1.26	.06	.02	.14	.16			.69					.48					T.													2.81
Longmont	do			.04	.82	.12	.24	.08					.32	.23																		1.85
Long's Peak (near)	do				.32	.08	.45			.70			.10						.05													1.70
Moraine	do																																
Platte Canon	do	.20		.06	1.67	.47	.15	.14	.29	.25			.81	.47								.35										4.86
St. Cloud	do				.68	.28	.44	.63	.05		T.	T.										.20										2.28
Sedgwick	do	2.50	.05	.10	T.	.10	T.	T.					T.	.20																		2.95
Sill Mine	do																T.	.35	.10			.10	T.									
Spicer (near)	North Platte																																
Waterdale	South Platte		.14	.18	1.18	.30	.28	.15	.05				.32	.06					T.													2.66
Westlake	do																																
Wray	Republican	.35	.17			.20							*	.23								T.										0.95
Yuma	do	.24	T.		1.10	.06								.36					.02													1.78
Nebraska.																																	
Ainsworth	Niobrara		1.58		.62	.13	T.	T.		.08		.87			T.							T.	T.									3.28
Alliance	North Platte	.30		.51		.30	T.			T.	T.											.30										1.41
Alma	Republican	.67		.10	.18		.14	.04	.02				.10	.54	.01				.11	.91												2.82
Anoka‖	Niobrara	.42	.72				.16			.03			.20								T.											1.53
Ashland	Platte	.15	1.09	.01	.05	.02	1.70	.08	.02	T.			.04	.19	.63	.81	.01		T.	.01	.06	.21	.01									5.09
Atkinson‖	Elkhorn	1.55		1.10	T.		.10	T.		.06			.25	T.																		3.06
Auburn‖	Little Nemaha		.09	.24	.61		.27	1.55		.13				.46	.60						.01		.52									4.48
Beatrice	Blue	.09	.56		.61		1.85	T.	.20	.12				.81	.30					T.			.05									4.59
Beaver City	Republican	.90		.05			.15		.83					.33	.03			T.														2.29
Bellevue	Missouri	.64	1.25		.05		.79		.14				.20	.07	1.25	.85				T.		.78		.03								6.05
Blair	do	1.09	1.00	.05			.45	T.					.23	1.33	.83	.47			.03		.07	.03										5.58
Bloomfield	do	.25	.52				.24			.18			.78			.08			1.00													3.05
Blue Hill	Republican		4.35	.41	.25					.75				1.50	1.25				2.25													10.76
Bridgeport	North Platte	.50	.30																			.25	T.									1.05
Brokenbow‖	Loup		1.25	.05	1.68		.12	.04	.04																							3.18
Burge	Niobrara	1.35	.05		.13	.13							.09																			1.75
Burwell	Loup																																
Callaway	do	1.03			1.70																											2.73
Cambridge	Republican	1.00		.02	T.	T.	.15	T.	.12		T.			.12	.06																	1.47
Canton (near)	North Platte			T.	.07		T.	.03	.06													.18										0.34
Columbus‖	Loup		2.11		.52		.68	.28		.35		.07	T.	.23	.13	T.			.30			T.			.06							4.73
Creighton	Missouri	1.27	.37	.04		.08	.21			.08	.01	.50	.08		.04				.67	.07		.01										3.43
Crete	Blue	.43		.10			1.45	.10					.10	.70	.42					.48												3.78
Culbertson‖	Republican	1.75	.39	.01	T.	.06	.30							.50																		3.01
Curtis	do	1.52	.10	T.	.43	T.	T.																									2.05
David City	Blue	.15	1.25		.30		1.28	.04		.02		.01	.08	.38	.43					.16	.06	.04	T.									4.20
Dawson	Great Nemaha	T.	.27		.61		1.95	.05	.61	.48					.54								.21	.01								4.73
Duff	Loup																																
Elsie	Republican																																
Enderalake‖	Loup	.40		.10					1.65		.35																					1.90
Ewing‖	Elkhorn	2.90	1.25	.11		.05	.34			.17		.42		.03																		5.27
Fairbury‖	Blue	1.94	.04	1.17		.44	.79	.31	.13			.09	.85	.29				.13				.04										6.22
Fairmont‖	do		.58		.12		.32	.70	T.	T.				.55	.50				1.13				T.								3.90
Fort Robinson‖	Niobrara	.70	T.		.61	.40	.01		.13	.02								T.				.28	.06									2.21
Franklin	Republican	1.00		.10	.65	T.	.15							.90				1.00														2.90
Fremont	Platte	1.18	2.28		.05		.78			.37		.10	.57	.28	.48				.10			T.		T.								6.19
Fullerton	Loup	1.21	1.27	.33	.57	.22	1.10		.16					.67				.11														5.58
Geneva	Blue	.85			.38	T.	1.34	.65	T.	T.	T.	T.	.19	.69	.61				.99			T.										5.10
Gordon	Niobrara	.81			.16		.02	.14						.03								.27		.02								1.45
Gosper	Republican	1.00			.20		.46							.08																		1.68
Gothenburg	Platte	.95	.02	T.	.30		.10					T.		T.																		1.37
Grand Island‖	do		1.04		.10		.16	.09	T.				T.	.11	.07				.45													2.02
Grant	Republican	1.00	.05	.40	T.	.05	T.	.04			T.			.18																		1.72
Greeley‖	Loup	1.05		.37	.34		.47		.03			.04							.07				T.	T.								2.37
Halsey	do	.55	.05	.75	2.73	.04	T.	T.			.05	.45			T.																	4.62
Hartington‖	Missouri		.85	T.			.38		.68			.86	.08	T.	.12	T.			1.10			.25										4.32
Harvard‖	Blue	1.46	.46	.04		.32	.89	.04	.02			.39		.54	.89				1.35													6.40
Hastings‖	do		2.06		.10			1.27						.12	.70				1.40													5.65
Hayes Center	Republican	1.15					.12	.03	.01						.24																	1.55
Hay Springs	Niobrara	.21		.45	T.	T.		.28	.04				T.									.37										1.35
Hebron	Blue	.62	1.14		1.46	T.	.55	T.			.16	T.		.92	.89				.39			T.										6.13
Holdrege‖	Republican	.04	.80				.38	T.	T.	T.				.28	.17																	1.67
Hooper	Elkhorn																																
Imperial	Republican	.83	.03	.32	T.	.29	T.							T.							.05											1.52
Kearney	Platte	.60			.57		.50	.05	.02				.09	.18				1.30														3.31
Kimball‖	South Platte	.07	.18	T.	T.	T.		.22				T.																				0.47
Kirkwood	Niobrara	*	1.93		.05	.14			.10		.40			.05								.04										2.71
Kowanda‖	North Platte	1.56	.13		.07					.07		.03																				1.86
Lexington	Platte	.44		1.60																												2.04
Lincoln	do	.08	.95	.03	.02	.01	1.65	.06	.15			.02	.49	.64	.16			.13	.02			.28										4.69
Loup	Loup	.98			1.16		.43	T.					.09		.08			T.														2.74
Loyal	Loup	.80		T.	1.60	T.		T.																								2.40
Lynch	Niobrara	1.20				.15				.55		.08																				1.98
McCook	Republican																																
Madison	Elkhorn	2.10	.75					.75		.20		.15	.53	.10					T.			.60										5.18

TABLE 2.—*Daily precipitation for September, 1909. District No. 6*—Continued.

Stations.	River basins.	Day of month																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Nebraska—Cont'd.																																	
Marquette	Platte	1.09	.81		.16		.81	.08	.01	T.				.32	.38				.21			T.	T.	T.									3.87
Mason City	Loup																																
Minden	Blue	1.00			.08		.63	.07	.02		T.	.18	T.	.27					1.15			T.										3.40
Nebraska City	Missouri		.66		.10		1.00	1.00	.20			.10		1.38	1.03							.30										5.77
Norfolk	Elkhorn	1.06	.88	T.	.06	T.	.35	.01		.45		.10	.32	.15	.16					.08		.08										3.64
North Loup	Loup	1.20			.25	T.	.40		T.			.05	T.						T.												1.90
North Platte	Platte	.30			.40	.02		.01						.01	.03						T.	T.										0.77
Oakdale	Elkhorn	1.28	.35	.03		.25	.32			.87		.27	T.	.07	T.				.68			.01										4.13
Omaha	Missouri	.94	1.05	.08	.02		.45	T.				.06	.84	1.13	.39				T.	T.	T.	.23		.06								5.25
Ord	Loup																																
Pawnee City	Great Nemaha		.45		.85		2.98	.06	.22	.14			.12	.68	.64								.22										6.36
Plymouth	Blue																																
Purdum	Loup	.47	.04	.82	.42	.04	.02			.08		.28																					2.17
Ravenna	do	.63	.26		.36		.05			.05	.13		.09						T.													1.57
Redcloud	Republican	.50	.21	T.	1.60	T.	.10	T.				.12		1.54	.25					1.10			T.									5.32
St. Libory	Loup																																
St. Paul	do	1.30		.25			.62			.10		.12		.11																			2.50
Santee	Missouri	.02	.14		T.	T.				.01		.10	.06		T.				.03													0.36
Sargent	Loup		.90		.58		T.	T.	T.	T.		.09																				1.57
Schuyler	Platte		1.85		.10		.85	.30		.26	.05	.20		.30	.28					.32	.05											4.56
Scottsbluff	North Platte	1.23	.23	.02	T.	.14	T.				T.		T.					T.	T.		T.	.15										1.77
Seward	Blue	.60				.70	.75	T.				T.	.65	1.20					.50	.12												4.52
Sheridan	Loup	1.33	.60	.10	T.	T.	.42	T.				.20	.09	T.	.13								T.									2.87
Sidney	North Platte		1.48	.19		.12								.05																		1.84
Springview	Niobrara	1.10	.15			.08				T.				T.								T.										1.33
Stanton	Elkhorn	1.00				.48		1.52	.72			.15		.75	.20																	4.82
Stratton	Republican	1.40	.05	.03			.19								.10																	1.77
Superior	do	1.45			.50		.10		.05	.50		.12	.80	1.85																		5.37
Tecumseh	Great Nemaha																																
Tekamah	Missouri	.24	.47				.48			.05		.20	.26	.10	.26					.10	.05	.50		.02								2.73
Turlington	Little Nemaha	.02	.40		.11		1.93	.12	.38	.05		.11	.75	1.01	1.16							.45	.03									6.52
Valentine	Niobrara	2.92			.01	.07		T.			.02											.16										3.18
Wahoo	Platte	.10	1.57	.15			1.87							.75	.57	.40			.26		.20	.14										6.01
Wakefield	Elkhorn	.19	.77		.03	T.	.38	T.		.03		.58	.64	.18	.11				.17			.18		T.								3.26
Walthill	Missouri																																
Watertown	Platte																																
Wauneta	Republican	.25		.30									.33							.05												0.93
Weepingwater	Missouri																																
Westpoint	Elkhorn	.86	.87				.70			.20		1.14	.20	.21					T.	.32	.34	.20		T.								5.04
Wisner	Elkhorn	1.87	.58	.74	.28	T.	.43	.67	.41			.43		.21								.21										5.83
York	Blue	.72	.13		.08		.96	.07					.05	.64	.35				T.	.36		T.	T.									3.36
Iowa.																																	
Afton	Missouri		1.01				.59	.05					.07	.24	.40								.34	.08									2.78
Allerton	Chariton	T.	.45		.15		.50	.06	1.13	.01			.34	.10	1.50								.32										4.56
Alta	Little Sioux		.19	.12		T.	.05	.02		.01		.18	.50	.14	.28	.17				.10		.13	.23		.03							2.15
Alta (near)	do		.35	.06	T.	.02	.07					.40	.32	.11	.43					.10	.10	.12	.08									2.16
Alton	Floyd	T.	.42	.04	.08	T.	T.		T.			.56	2.20	.22	.25				T.	.43	T.	.18	T.	.04								4.42
Atlantic	Nishnabotna	1.07	.55		.05		.48	T.				.31	.27	.60	1.54							1.05	.09	.02								6.03
Audubon	do		.42		.06		.25	.01				.12	1.10	.52	1.52							1.27	.05									5.32
Bedford	Missouri	.12	.75		.29		.79	.12	.04	.89				1.25	.18					.01			1.05	.04									5.53
Chariton	Chariton	.92			T.		.53		.45	.24			.33	.40	.95							.15										3.97
Clarinda	Nodaway	T.	.90	.27	.18		.36	.04	.57	.12	.82	.02		1.00	.56							.67				.08						5.59
Corning	do	.70	.82		T.		.48	.11	T.	T.				1.55	.39							1.07	T.									5.12
Corydon	Chariton		.86		.09		.57	.01	.27	.42			.08	2.00	.50						T.		.19	T.									4.99
Creston	Missouri	.23	.04	1.02	.06		.10	.46	T.	.02	T.			1.01	.29								.97		.05							4.25
Cumberland	Nodaway	.15	.18		.12			.17	.21	.23	.26		1.20	.87									.74	.01								4.14
Denison	Missouri		.42	.02	.05		.36					.13	.40	.98	.47					.53	.02	.88	.04	.13								4.43
Elliott	Nishnabotna		.90		.10		.43		.08				.18	.98	1.85							.40	.11									5.03
Greenfield	Nodaway																																
Hancock	Nishnabotna	.52	.80		T.		.60		T.			.30	T.	1.50	1.18				T.			T.	.50	.10								4.90
Harlan	do	1.55	.62		.03		.47	T.	T.			.19	1.26	1.08	1.15				T.			.81	.03	T.								7.19
Hopeville	Missouri	.08						.61		.13				.21	.44					.02			.34	T.								1.83
Inwood	Big Sioux		.61	.03		.01	T.		T.	.21		.13	2.53	.05	.03				.56	.09		.13		T.								4.38
Lamoni	Missouri	.24	.43		.27		.61	.07	.78	.08				1.57	1.25								.45	T.								5.75
Larrabee	Little Sioux		.18		.10	.03			T.			1.09	.95	.38	.80				1.20		.05	.03		.06								4.87
Le Mars	Floyd		.88	.03	.05	T.	.13		T.	T.		1.01	2.25	.45	.34				T.	.32	.11	.13		.02								5.72
Lenox	Missouri	.48	.63		.10		.38			T.			.02	.95	.15								1.00	T.								3.71
Leon	do		.39		.15		.50	.05	.08	.10				1.00	2.05								.33									4.65
Little Sioux	Little Sioux	1.50	.43			.36			.02	.07		.10	.57	.20	.57					.03	.12	.64	.01									4.62
Logan	Missouri	1.39	.45				.41		.01			1.21	1.14	.81	1.11				T.		.18	.49	.04	.01								6.16
Mt. Ayr	do	1.25	.50		.22		.55	.20	.36	.22		T.	T.	.18	.30					T.			.50	.02								4.30
Odebolt	do		.31				.19					.35	.30	.30	.41					.16	.05	1.12										3.19
Onawa	do	.25	.86		.20		.43			.60		.61	.33	.10	.20							.45		.15								4.18
Pacific Junction	do	.29	1.21		T.		.85	T.				T.	.21	1.34	1.20				T.	T.		.75	.03	T.								5.88
Rock Rapids	Big Sioux		.70		T.				.25	T.			2.10																			3.05
Sheldon	Floyd		.52	.08	.05				.07			.30	2.10	.15	.30				.40			.15										4.12
Sibley	Big Sioux		.04	.47			.02					.15	1.95	.14	.07	.15				.42			.31		T.							3.72
Sioux Center	Floyd		.72	.04	.03	T.	T.			.04		.18	2.23	.22	T.				.05	.58		.18		.06								4.33
Sioux City	Missouri	T.	.48		T.	.01	.21		T.	.01		.37	.14	.40	.08				.27		T.	.02		T.								1.99
Thurman	do		1.17		.15		1.59	T.	.32	.37		.08	T.	1.63	1.12							.83	.08									7.34
Washta	Little Sioux		.40				.10					.47	.17	.12	.21				.18		.61	.18										2.44
Woodburn	Chariton	T.	.70		.06		.46	.02	.15	.28			T.	.71	1.00						T.		.23	T.									3.61
Kansas.																																	
Abilene	Smoky Hill	.04		T.	T.		.08	1.90	.04				.24	.54								T.										2.84
Agricultural College	Kansas	.02		.23	.04		.79	1.28	2.38	.25			T.	T.	T.				T.			T.	.20	.02								5.21
Alton	Solomon	.12		T.		T.	.11	.09	.75	.22			T.	1.93	.11				T.	.40												3.73
Atchison	Missouri	T.	2.10		1.00		1.30	2.00	1.20	1.80				.50	.20					T.			.70	.06								10.86
Baker	do		2.30	T.	.85		T.	1.70	.65	.40				.28	.92								.60		T.							7.70
Beloit	Solomon																																
Blakeman	Republican	.84	.08						T.					.46	.16					T.												1.54
Blue Rapids	Blue																																
Centralia	do		2.35		.36		2.12	1.66	.02	.43				.26	.03							.27	.04	T.								7.54
Chapman	Smoky Hill	T.		T.	.32		.20	.45	.98	.05			T.	.30									T.									2.30
Clay Center	Republican	.12	.25		.07		.75	.12	.89	.90				.33								.20		T.								3.63
Colby	do	.06		.70	.13	T.	T.	.03			.60			.39	.04				T.				.02									1.97
Concordia	do	.56	.01	T.	.05	T.	1.87	.34	.73	.83			.87	.97	.02				T.	.05		T.	T.									6.30
Densmore	Solomon	.20		.22						.12	.13	.02		.91						T.		T.										1.60
Dresden	Republican	.21	.14	.09	.95		T.		T.	T.		1.06		.29	.09																	2.83
Ellsworth	Smoky Hill	T.		T.	T.		.09	.02	.77	.22			.30	1.60	.03					.38												3.41
Enterprise	do						.11	.35	1.12	.06			T.	.20	.08																		1.92
Eskridge	Kansas		.40		.04		.42	2.31	.46	.05				T.								.95	T.									4.63
Farnsworth	Smoky Hill			.13				.03	1.26			.03	T.	1.61								T.										3.06
Ft. Scott	Marmaton		.04							T.				T.	1.51							.10										1.65
Frankfort	Blue	T.	2.58		.30		2.25	.60	.90	.43			T.	.42	.20					.15					.10								7.93

TABLE 2.—*Daily precipitation for September, 1909. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Kansas—Cont'd.																																	
Garnett	Marais des Cygnes		.06				.22		.25					.15	.96																	1.64
Gove	Smoky Hill	.09							1.87				*	1.75																		3.71
Hanover	Blue	.17	2.05		.83		1.72	.03	.12	.20			.01	1.35	.42							.04	T.	T.								6.94
Harrison	Republican	.34	2.26		.23	T.	.12	.04	.02	.05		.14	.14	1.47	.24					.37			.01									5.43
Hays‖	Smoky Hill	T.			T.	T.	T.	T.	.57	.15				1.38	.68						T.										2.78
Hill City	Solomon																															
Horton	Kansas		1.60		.85		1.80	.96	.86	.78				.15	.45				T.		T.		.50	T.								7.95
Hoxie	Solomon	.10		.94	.95				.10	.21	.36			.90																		3.56
Jewell	Republican	.34			.08		1.03							2.05							.02											3.52
Lawrence	Kansas		1.23	T.	.02		.26	7.23	.61	.15			.14	.96									.85	.04								11.49
Lebanon	Solomon	.43		.32				.34		.34			1.45	.67																		3.55
Lindsborg‖	Smoky Hill																															
Manhattan‖	Kansas	*	.28	T.			T.	1.93	1.70	.25				.03	.07	T.						*	.11	T.	T.							4.37
Mankato	Republican	.31			.34		.29	.02	.17	.09				1.95	.70																	3.87
Minneapolis	Solomon	.10		T.	T.		.32	.22	1.10	1.75			.37	1.35	.04					.01				T.								5.26
Moran	Marmaton		T.						.36		T.			.33	.42						T.											1.11
Norton	Republican	.30			.33			T.	T.	T.	.56		.05		.85					1.10												3.19
Oberlin	do	.68	.01	.08	.43	T.	.02	.10			.30	.03		.30								.01										1.96
Oketo	Blue	*	1.42		.88		2.48	.02	.10	.17				1.36	.23					T.		.14		.02								6.82
Olathe	Kansas		1.19	T.	.10		.50	2.52	.16	.03				1.62	.55								.45	.50								7.62
Osage City‖	Marais des Cygnes		T.			T.		.40	.42	.05				T.	.58																	1.45
Ottawa	do		.13		.08		.34	2.55	.10	T.				.35	.46								.21									4.22
Paola	do																															
Phillipsburg	Solomon	.35		T.	.26		T.	.04	T.	.06		.40	.04	1.16	.03				T.	.74												3.08
Pleasanton	Marais des Cygnes		.13					1.40	.44					.15	1.42																	3.54
Republic	Republican																															
Russell	Smoky Hill																															
St. Francis	Republican	.20	T.	.08	1.40	.02	.35							.35	.25					.01												2.66
Salina	Smoky Hill	.02		T.	T.		.03	.57	1.74	T.			.19	.45	.01					T.		T.	T.									3.01
Scott	do			.08				T.	.50		T.	T.		1.00																		1.58
Topeka	Kansas	.05	1.50	.04	.01		4.29	3.80	.84	.02			T.	.61	.01				T.	T.		.26	.04	.01								11.48
Valley Falls	do		2.01		.01		2.25	.51	1.22	.50				T.	.60					T.			.30	.01								7.41
Vinland	do		.58		.06		.46	3.77	.15	.11				1.28	.35							.80										7.56
Wakeeney	Smoky Hill	.04						.03	.52	1.38	.96		.03	1.26	.05																	4.27
Wallace	do	T.			.15				.14		T.		T.	1.00	.12																	1.41
Wamego	Kansas	T.	.65	T.	.10		.70	1.42	3.75	.45				.24	T.				T.	T.		T.	T.									7.31
Missouri.																																
Albany‖	Grand																															
Amoret	Osage		.28				T.	1.33	.03					.45	1.54																	3.63
Appleton City	do							.75	.40				.10	.02	.95																	2.22
Arlington‖	Gasconade																															
Arthur	Osage		.15					1.00		T.				2.45							T.											3.60
Avalon	Grand		.52		.38		1.05	.75	.67	.35				.05	1.48								.32									5.57
Bagnell‖	Osage																															
Bethany	Grand	.25		.33			1.03	.23		.75				1.55	.45								.71	.57								5.87
Bolivar	Osage					.22		.16	.05		.06	.05		1.91								.07										2.52
Boonville‖	Missouri			.36	.10			1.60	.10	.16				2.04	.40							.01										4.77
Brunswick‖	Grand			.33	.58			1.81	.07	1.13				.37	.75	.07						.23	.59		.05							5.98
Clinton	Osage		.08		T.	.02		1.80	.25					.08	1.84																	4.07
Columbia	Missouri		.26		.06		1.34	.88	.08	.03				.04	.20					T.		.16	.04									3.09
Conception	do	T.	.28		.48		1.16		.78	.19				.54	.44								.78	T.								4.65
Darksville	Chariton				.30		.78	2.70	.65	.35					1.80								.55									7.13
El Dorado Springs	Osage		T.				.18	.10		T.			T.	.10	2.25							T.										2.63
Fairport	Grand		.19		.91		2.70	.03						1.60	.42								.70	.08								6.63
Fayette	Missouri		.29		.25		.56	3.00	.25	.08				1.78							.02		.02									6.25
Fulton	do																															
Gallatin	Grand		.75		.85		1.30	.25	.60	.27	.05			.50	.37							.25		.10								5.29
Glasgow‖	Missouri			.29	.81			2.92		.46					.54								.12									6.16
Grant City	do	.70	.62		.42		.94	.04	.20	.44				.37	.65					T.		T.	.80	.04	T.								5.22
Harrisonville‖	Osage		.18	.22		.05		2.23	1.40	.02				.39	3.92	.03							.02										8.46
Hazelhurst	Grand		.30		.48		.83	.25	.50	.25				.45	.60					T.			.27										3.93
Hermann‖	Missouri			.02	T.	T.		4.10	.08	.02					.08	.90						T.	.52	.16								5.88
Houston	Gasconade			T.	1.58				.40	.28					.45							.70	.42									3.83
Huntsville	Charitan			.30			3.00			.75	.75				2.00								.20									7.00
Jefferson City‖	Missouri			T.				1.42	.04	.08					.50	.01							.30									2.35
Kansas City	do	T.	.93	.01	.02		1.62	.88	.77	.20			.27	.97	.35					T.		.22	.51	.03								6.78
Kiddder‖	Grand		.35	.45	1.10	.07	.02	2.05	.26	.68				.82	.83								.57		.08							7.28
Lamonte	Missouri		.33	T.	.10		.15	1.56	.11	.04				T.	1.15	T.							.03									3.47
Lebanon	Osage				.05				.22	.18				.50	.07							.18	.06									1.26
Lexington‖	Missouri		.08	1.63	.17			3.76	.17	.92				T.	4.48	.10							.73									12.04
Liberty	do		2.00	.45			1.25	3.35	.55					.90	.73								.23	.05								9.51
Lockwood	Osage		.03				.18						T.		1.77																	1.98
Marshall	Missouri		.86		.16		.76	1.84	.35	.35			.07		1.16								.05									5.60
Marshfield	Osage																															
Maryville‖	Missouri		.18	.18	.45		.53	1.02	.60	.30				.65	.20						.84	.05										5.00
Mt. Vernon	Osage				.50	.05		.25						.20	2.25							.05										3.30
Nevada	do		.05					.62	.11						1.42						.64											2.84
New Palestine	Missouri		.14				1.45		.10					.93	.10							T.										2.72
Oregon	do		.57		.83		2.16	T.	.50	.30				.18	.84					.03			.42	.03								5.86
Osceola‖	Osage		.05	.05				.50	.05					.40	3.77	.10																4.92
Parkville	Missouri																															
Rolla	Gasconade			.09		.28		.84	.21						.56	.01						.65	.07									2.71
St. Charles	Missouri			.01	T.		T.	1.05	T.	.08					.86							1.39	.37									3.76
St. Joseph	do	*	.36	.56	.56		.02	1.86	.60	.38			*	T.	1.20	.02				T.		*	.32	.04	.04							5.96
St. Louis	Mississippi		T.	.06	T.		.02	.92	.03	.69					.62	T.						1.70	.18									4.22
Sublett	Charitan																															
Trenton	Grand		.27		.45		.60	.35	.45	.25	.90			T.	.65								.20	T.								4.12
Unionville‖	Charitan		T.	.40	.15	.10	.20	.60	.06	1.40					1.40	.14							.60									5.05
Versailles	Osage																															
Warrensburg	Missouri		.37	T.	.11		.26	1.80	.13	.03				.01	1.59					T.			T.									4.30
Warrenton‖	do			.07	.02	T.		3.04	.26	.01						1.47						T.	.66	T.								5.53
Warsaw	Osage		.04		T.			2.62	.18	.02	T.		2.25	.08	1.35						.95	.08	.02									7.59
Wheatland	do																															

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 6, Missouri Valley.*

Date.	Wyoming.																Montana.											
	Basin.		Cheyenne.		Fort Laramie. ‡‡		Lander.		Newcastle.		Pathfinder.		Sheridan.		Yellowstone Park.		Billings. ‡‡		Dillon.		Havre.		Helena.		Lewiston.		Malta.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min
1...	80	60	74	58	71	55	70	59	68	53	.....	.....	69	61	57	51	64	61	82	52	82	52	62	55	67	49	83	48
2...	76	59	81	56	89	57	81	50	75	50	.....	.....	71	58	71	50	74	59	70	49	79	63	65	54	71	47	90	59
3...	79	51	81	52	88	55	82	49	81	52	.....	.....	74	50	69	47	76	51	67	35	66	43	56	47	50	41	78	53
4...	76	49	58	46	55	51	63	49	61	50	.....	.....	61	47	58	43	66	49	71	38	72	32	66	46	69	42	76	32
5...	71	47	58	46	74	50	66	45	62	45	.....	.....	73	44	67	43	75	42	65	40	82	39	71	46	71	38	84	39
6...	75	48	61	53	72	51	63	54	70	52	.....	.....	75	49	67	47	80	42	69	39	85	39	76	48	80	38	84	39
7...	81	57	71	53	85	56	75	50	75	51	.....	.....	76	53	64	47	84	43	74	46	87	44	72	54	82	41	87	44
8...	80	57	70	50	86	52	75	44	80	49	.....	.....	79	50	69	47	85	50	75	48	87	56	77	50	80	44	89	50
9...	82	48	75	48	87	49	78	45	85	48	.....	.....	83	48	72	42	87	44	78	40	85	54	81	49	79	40	87	50
10...	85	49	76	49	90	50	78	45	86	52	.....	.....	86	44	70	44	90	43	71	39	91	48	74	47	82	48	93	48
11...	70	48	79	47	90	49	65	45	89	54	.....	.....	65	50	56	37	64	46	51	35	56	48	48	42	60	41	85	51
12...	58	45	58	39	69	47	58	34	72	45	.....	.....	55	45	42	33	64	46	68	36	62	46	57	43	59	41	76	45
13...	60	39	59	40	68	42	70	31	67	38	.....	.....	68	39	63	38	73	43	74	48	66	49	67	47	65	37	70	41
14...	60	47	69	39	78	39	73	36	75	40	.....	.....	67	46	67	40	73	44	79	47	67	44	69	47	89	40	67	41
15...	68	50	76	41	89	41	80	37	80	42	.....	.....	78	40	73	40	83	42	80	41	79	49	74	47	72	42	78	41
16...	80	47	77	50	86	44	78	41	81	45	.....	.....	78	43	71	38	84	42	74	36	84	48	76	45	81	42	85	48
17...	84	46	77	43	89	40	77	46	84	50	.....	.....	85	40	64	36	86	40	69	31	70	46	59	42	76	38	85	56
18...	80	45	62	38	70	55	61	34	62	37	.....	.....	60	37	53	27	65	32	71	32	63	44	56	42	72	39	63	45
19...	63	35	72	37	83	35	72	32	74	42	.....	.....	70	32	57	41	72	23	66	39	67	38	62	39	58	32	68	37
20...	65	40	76	44	82	48	69	41	70	40	.....	.....	65	42	57	36	68	46	68	36	64	48	56	41	57	34	65	41
21...	60	41	55	37	57	45	52	34	64	38	.....	.....	52	42	44	28	56	29	59	32	59	46	52	41	65	37	60	38
22...	60	35	51	30	61	39	54	29	58	32	.....	.....	56	37	46	26	61	37	67	31	61	45	52	42	54	31	63	32
23...	62	31	61	29	67	31	63	25	56	29	.....	.....	62	34	62	26	69	33	69	30	66	35	63	34	65	30	69	31
24...	70	31	73	32	85	28	73	29	79	31	.....	.....	75	30	69	34	82	30	74	31	80	32	72	37	84	40	81	32
25...	81	38	77	39	88	32	80	36	85	41	.....	.....	85	34	75	43	91	31	79	41	90	44	81	43	82	35	91	41
26...	82	40	77	39	89	40	81	42	90	49	.....	.....	89	46	68	48	90	34	83	43	82	53	76	53	80	47	84	46
27...	80	46	78	44	89	39	81	41	86	52	.....	.....	85	45	74	44	89	44	84	47	84	51	78	54	84	42	86	41
28...	82	44	75	44	85	34	83	41	87	51	.....	.....	86	42	75	40	90	43	84	50	91	46	81	48	87	48	88	47
29...	83	43	77	41	90	38	76	48	83	50	.....	.....	79	46	58	44	82	42	74	37	77	55	70	49	80	44	80	58
30...	79	46	79	45	85	38	74	40	84	47	.....	.....	69	40	54	29	72	50	72	33	67	45	53	42	58	30	72	51
31...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	73.8	45.4	70.4	43.6	79.9	44.3	71.7	41.1	75.6	45.2	.....	.....	72.5	43.8	63.1	39.6	76.5	42.0	72.2	39.4	75.0	46.1	66.7	45.8	72.0	39.9	78.9	44.2

Date.	Montana.				North Dakota.										South Dakota.													
	Miles City.		Poplar.		Berthold Agency.		Bismarck.		Dickinson.		Jamestown.		Williston.		Aberdeen. ‡‡		Chamberlain.		Huron.		Kadoka.		Lemmon.		Pierre.		Rapid City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	76	60	84	45	.....	.....	74	47	71	43	73	36	81	42	63	42	65	51	63	46	.....	.....	73	52	62	53	58	53
2...	66	58	85	47	.....	.....	64	56	62	55	64	51	77	59	57	45	62	50	57	52	.....	.....	64	51	60	55	70	57
3...	74	56	74	52	.....	.....	72	52	73	48	77	49	80	46	71	53	68	54	69	55	.....	.....	75	56	73	57	75	56
4...	69	46	70	35	.....	.....	67	43	73	41	66	43	66	36	65	51	60	51	66	49	.....	.....	64	45	67	54	62	46
5...	81	52	83	42	.....	.....	73	41	75	41	70	31	78	44	67	37	64	40	66	37	.....	.....	72	40	65	48	70	51
6...	83	50	82	42	.....	.....	74	47	73	45	63	41	76	38	72	50	74	45	73	52	.....	.....	75	49	74	52	73	56
7...	81	57	83	47	.....	.....	76	49	77	51	79	34	79	54	72	46	69	44	72	46	.....	.....	71	43	70	53	72	55
8...	85	54	90	49	.....	.....	80	53	88	57	76	45	83	50	70	47	78	52	73	59	.....	.....	72	45	77	59	79	52
9...	88	54	87	49	.....	.....	90	54	85	52	78	49	84	56	83	52	80	60	81	58	.....	.....	87	50	87	56	84	51
10...	94	50	92	51	.....	.....	86	48	85	45	80	44	86	58	85	51	86	64	86	54	.....	.....	89	51	91	60	85	53
11...	76	59	75	54	.....	.....	90	62	79	52	70	60	77	57	88	53	91	65	85	66	.....	.....	84	56	94	67	88	54
12...	62	52	63	47	.....	.....	66	54	69	49	76	58	62	50	80	62	80	62	80	59	.....	.....	69	50	75	56	62	47
13...	72	46	74	47	.....	.....	71	46	70	41	60	52	71	46	72	51	82	53	71	52	.....	.....	70	42	72	53	68	41
14...	64	50	67	44	.....	.....	65	42	63	41	62	34	65	44	70	41	77	60	75	43	.....	.....	63	43	70	45	66	46
15...	80	47	80	38	.....	.....	80	34	77	34	73	31	78	40	72	35	80	37	73	38	.....	.....	79	37	84	42	80	44
16...	86	50	85	41	.....	.....	80	45	79	46	75	39	76	47	81	36	85	46	82	46	.....	.....	83	49	85	52	80	53
17...	92	58	92	54	.....	.....	86	47	87	48	82	38	88	55	83	41	85	48	83	48	.....	.....	89	48	89	53	87	52
18...	64	48	78	47	.....	.....	70	41	74	47	75	52	66	41	74	46	80	58	82	50	.....	.....	79	46	72	50	66	42
19...	70	41	70	37	.....	.....	74	38	73	36	65	34	69	38	77	54	75	36	74	38	.....	.....	73	34	76	43	75	40
20...	68	44	68	33	.....	.....	76	40	60	39	74	41	64	39	85	37	91	55	89	56	.....	.....	75	43	88	62	79	48
21...	62	48	65	33	.....	.....	61	45	61	37	66	43	63	37	57	53	74	51	63	49	.....	.....	62	43	66	50	55	45
22...	62	46	65	32	.....	.....	63	37	60	36	62	37	58	39	65	43	64	43	60	42	.....	.....	60	35	64	44	59	39
23...	66	40	78	34	.....	.....	62	36	62	35	60	35	62	36	62	40	71	38	62	36	.....	.....	62	31	65	43	61	35
24...	80	36	80	41	.....	.....	74	30	73	35	74	29	73	34	70	32	72	36	72	34	.....	.....	73	36	78	40	73	37
25...	88	46	88	43	.....	.....	79	46	80	35	76	34	81	49	73	35	80	64	76	46	.....	.....	79	40	81	50	85	44
26...	94	50	95	60	.....	.....	84	52	86	52	79	47	88	49	78	40	82	60	76	51	.....	.....	82	48	88	54	88	51
27...	90	52	86	45	.....	.....	90	53	86	49	89	47	86	47	86	50	88	50	85	49	.....	.....	90	53	92	55	88	46
28...	93	48	86	49	.....	.....	82	48	80	47	64	45	83	46	80	52	82	48	80	46	.....	.....	82	52	85	56	87	51
29...	86	66	86	50	.....	.....	77	41	80	57	62	39	80	55	68	42	83	45	72	42	.....	.....	84	53	78	49	86	45
30...	76	50	73	42	.....	.....	82	47	81	43	67	33	75	47	78	38	84	45	77	42	.....	.....	.....	.....	87	52	88	51
31...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	77.5	50.3	79.5	44.3	.....	.....	75.6	45.8	74.7	44.6	71.5	41.8	75.0	46.0	73.5	45.0	77.1	50.4	74.1	48.0	.....	.....	75.2	45.5	77.2	52.1	75.0	48.1

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 6*—Continued.

Date	South Dakota.						Colorado.				Nebraska.																	
	Sioux Falls.		Watertown.		Yankton.		Denver.		Wray.		Alma.		Bridgeport.		Grand Island.§§		Hay Springs.		Hebron.		Lincoln.		North Platte.		Oakdale.		Omaha.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	65	39	62	41	57	51	80	60	74	60	80	54	90	48	70	57	67	50	67	59	67	59	69	53	57	53	65	53
2...	56	50	58	51	63	52	88	59	90	60	83	58	85	55	71	56	80	55	79	58	82	56	86	58	69	54	77	55
3...	64	54	74	52	68	57	81	57	89	60	87	67	89	57	82	59	85	54	80	60	83	61	88	61	76	59	76	61
4...	69	55	70	50	68	49	62	51	78	56	76	63	67	49	70	62	70	47	78	58	71	54	68	50	66	47	68	54
5...	70	34	67	35	65	41	59	51	62	49	68	45	61	48	66	46	68	42	71	46	72	47	62	49	65	37	70	48
6...	69	46	72	51	64	54	60	54	68	54	68	56	74	49	62	46	72	46	65	55	61	56	70	53	60	52	62	56
7...	68	50	74	44	65	52	72	55	72	55	65	56	80	48	62	56	75	50	62	59	64	59	68	57	65	56	65	58
8...	69	49	72	58	70	62	78	53	87	57	82	61	84	48	79	53	80	48	81	50	75	61	87	57	76	60	71	61
9...	80	60	81	61	74	60	76	51	89	49	89	55	85	48	85	63	84	48	86	60	86	64	85	55	80	56	82	66
10...	85	52	87	53	85	51	80	56	90	50	91	53	88	49	84	53	85	45	87	61	87	61	87	49	81	52	86	62
11...	87	66	84	62	86	63	81	57	91	53	95	55	92	49	82	66	90	50	95	61	96	71	90	63	89	63	89	70
12...	84	60	84	62	84	61	60	44	82	53	85	70	80	50	88	70	70	52	91	62	93	67	72	58	83	61	93	68
13...	74	58	72	54	70	56	53	43	67	50	75	56	72	48	66	56	78	45	63	59	67	57	66	53	68	55	69	58
14...	70	53	76	45	75	5C	71	43	78	42	76	58	76	35	70	50	72	46	72	54	74	56	77	46	73	51	69	55
15...	68	40	71	39	72	45	78	45	86	40	76	47	80	4C	71	42	80	35	74	47	72	48	82	42	71	38	71	50
16...	85	50	82	44	82	56	78	51	89	48	89	49	85	38	82	53	82	40	82	50	83	54	87	48	80	47	81	54
17...	84	48	81	48	82	51	80	51	86	41	88	49	87	54	82	56	86	42	87	52	83	53	87	50	80	45	83	55
18...	84	53	81	57	84	58	76	50	87	48	74	52	74	43	84	60	76	46	78	60	81	61	76	53	83	57	83	62
19...	82	45	74	40	72	46	79	44	79	40	78	56	82	34	76	50	78	28	82	58	80	57	77	43	72	45	81	59
20...	85	60	83	52	87	56	82	53	80	50	85	60	88	39	84	56	85	45	86	57	88	61	89	47	84	51	86	65
21...	84	55	66	50	75	52	64	38	74	50	76	43	80	47	78	62	72	41	85	61	86	59	72	49	71	51	83	58
22...	80	43	61	45	64	45	57	34	65	41	68	50	61	38	66	50	60	36	66	52	67	48	64	39	62	42	63	53
23...	83	40	62	38	67	41	63	38	69	33	72	36	75	35	76	42	55	42	70	39	72	44	67	37	67	35	68	47
24...	75	38	71	35	74	40	75	39	82	32	80	34	84	30	74	36	80	30	78	38	75	41	78	34	72	32	72	46
25...	77	42	73	43	75	48	81	45	83	36	84	48	85	37	77	50	84	40	78	52	76	54	80	43	75	41	74	51
26...	80	48	71	45	73	50	80	47	83	55	79	47	85	38	75	41	75	42	76	46	72	49	81	51	74	43	70	50
27...	79	50	78	43	77	47	79	48	81	55	76	43	85	45	74	43	84	40	70	48	71	45	80	47	75	45	69	47
28...	81	42	78	46	82	58	77	48	84	36	85	37	87	35	80	40	88	34	80	42	86	47	87	40	84	46	85	50
29...	74	43	68	38	76	49	80	47	86	35	87	43	86	48	81	46	82	34	84	47	77	52	86	43	75	45	74	53
30...	78	38	74	38	76	45	83	49	87	39	85	46	86	49	81	47	85	42	80	46	77	47	86	48	76	43	74	52
31...																												
Mns	76.3	48.7	73.6	47.3	73.7	51.5	73.8	48.7	80.6	47.6	80.1	51.6	81.1	44.4	75.9	52.2	77.6	43.2	77.8	53.2	77.5	55.0	78.5	49.5	73.6	48.7	75.3	55.9

Date.	Valentine, Nebr.		Iowa.						Kansas.										Missouri.							
			Clarinda.§§		Sibley.§§		Sioux City.		Colby.		Concordia.		Salina.		Topeka.		Wakeeney.		Columbia.		Kansas City.		St. Louis.		Unionville.§§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	61	52	67	55	60	44	61	51	90	62	73	61	89	66	76	62	83	67	80	60	73	64	72	58	80	55
2.....	73	56	79	56	57	44	63	55	94	59	86	61	96	63	93	59	92	57	76	58	83	58	74	57	65	56
3.....	79	55	76	56	61	52	66	58	86	61	80	61	85	60	79	66	83	65	87	68	81	66	92	63	80	54
4.....	64	47	73	60	65	54	67	56	79	58	73	58	76	60	78	61	78	63	83	63	82	60	82	66	75	56
5.....	56	45	73	44	67	38	64	42	65	49	71	49	78	52	72	54	72	48	76	56	72	54	74	60	77	44
6.....	69	53	62	46	66	38	61	54	69	56	68	59	76	63	65	60	80	62	68	57	65	60	74	58	66	50
7.....	67	54	60	57	66	44	68	51	68	54	63	60	67	60	62	58	75	57	64	56	64	56	67	57	70	54
8.....	83	55	72	55	69	44	69	61	86	34	79	51	83	62	86	62	85	61	86	62	84	63	79	64	75	60
9.....	82	54	87	60	78	59	80	63	88	58	88	63	90	65	88	67	88	60	88	66	86	68	89	69	86	64
10.....	87	54	87	59	85	52	82	55	88	52	89	63	96	64	91	68	86	53	88	64	88	72	86	68	88	66
11.....	88	60	90	62	82	52	86	69	93	59	96	72	100	68	97	71	96	64	89	69	93	72	86	67	87	65
12.....	68	56	94	69	83	63	87	63	80	54	95	68	100	65	97	74	86	69	94	71	95	72	89	68	92	66
13.....	65	48	87	62	68	56	68	58	59	51	68	58	78	65	87	68	69	54	91	69	87	69	91	71	90	70
14.....	72	42	71	56	66	54	72	53	75	43	74	56	73	56	71	60	74	48	77	59	73	62	88	66	95	65
15.....	80	40	71	48	69	39	69	46	83	45	74	53	78	50	74	55	80	49	74	52	74	57	74	59	72	54
16.....	82	45	83	46	79	39	81	52	89	52	89	56	90	51	86	52	89	54	78	44	80	55	73	55	76	46
17.....	86	52	85	52	81	49	81	53	85	47	88	56	86	50	89	60	85	51	90	55	86	62	80	59	81	50
18.....	66	39	86	53	82	51	81	61	89	58	82	65	82	53	86	61	87	60	87	61	84	65	84	65	86	53
19.....	75	34	86	55	73	47	75	51	80	48	83	62	90	64	87	62	82	52	84	56	83	66	86	63	85	60
20.....	88	61	89	56	80	48	84	62	90	57	88	64	92	60	88	62	88	59	87	64	86	68	83	68	86	59
21.....	63	42	84	60	78	59	79	55	79	55	87	61	90	65	84	57	79	59	71	61	79	58	73	62	80	62
22.....	60	40	74	50	60	46	64	48	66	44	68	47	71	54	67	52	70	57	64	51	67	55	79	56	66	56
23.....	63	37	69	40	66	35	66	43	72	34	72	42	80	37	73	45	73	39	70	43	71	50	66	53	70	42
24.....	77	38	72	38	71	36	72	39	80	38	77	40	83	38	74	46	82	42	71	41	74	51	68	52	75	40
25.....	78	44	75	39	74	36	72	50	84	44	80	52	85	42	74	49	84	54	72	42	72	53	69	53	76	44
26.....	82	54	70	42	70	42	69	50	81	45	74	47	89	46	69	49	80	48	64	44	64	50	62	46	68	37
27.....	83	51	70	35	71	42	71	46	78	43	71	43	85	37	69	43	76	41	66	37	65	46	62	43	70	35
28.....	90	45	81	38	78	42	82	55	83	40	82	42	82	34	79	45	79	42	75	37	74	48	70	47	75	40
29.....	83	45	79	46	68	48	72	48	87	39	84	50	87	42	82	53	87	49	80	53	81	55	78	55	77	46
30.....	87	49	75	42	73	41	72	47	86	38	80	51	91	48	77	51	87	48	74	48	73	54	69	52	75	42
31.....																										
Mns	75.6	48.2	77.6	51.2	71.3	46.5	72.8	53.2	81.1	49.2	79.4	56.0	84.9	54.7	80.0	57.7	81.8	54.4	78.5	55.6	78.0	59.6	77.3	59.3	77.5	53.0

Climatological Data for September, 1909.
DISTRICT No. 7, LOWER MISSISSIPPI VALLEY.

ISAAC M. CLINE, District Editor.

GENERAL SUMMARY.

The weather during the first half of the month was warm in all portions of the district. There was an unusually warm period at the opening of the month over the western portion of the district on the 1st and 2d, and over the eastern portion on the 2d and 3d. A change to much colder took place about the 13th in the western and the 14th in the eastern portion of the district, and cool weather continued until the close of the month. The mean temperature was about normal or above, except over the western portion of the immediate Mississippi Valley and the mountainous portions of Colorado and New Mexico. Monthly mean temperatures and departures from the normal for the various States are reported as follows: Missouri area, 69.8°, −0.4°; Kansas area, 71.7°, +1.8°; Colorado area, 59.2°, −1.4°; New Mexico area, 62.6°, −2.4°; Texas area, 73.7°, +1.6°; Oklahoma, 74.5°, +1.3°; Arkansas, 74.7°, +1.5°; Tennessee area, 71.3°, −0.7°; Mississippi area, 75.2°, +0.1°; Louisiana, 77.5°, +0.2°.

The precipitation over Oklahoma and the Kansas, Colorado, New Mexico, and Texas areas occurred generally during the first half, and very little precipitation occurred during the latter half of the month. Over the eastern portion of the district, showers occurred during the first half of the month and there were general heavy rains on the 20th–21st during the passage northward of the tropical hurricane. The precipitation was above the normal over the extreme eastern and western portions of the district; elsewhere, there was a deficiency, except in scattered localities. Monthly average amounts, with departures from the normal, for the various States and parts of States, are reported as follows: Missouri area, 4 inches, +0.54 inch; Kansas area, 1.91 inches, −1 inch; Colorado area, 3.34 inches, +2.28 inches; New Mexico area, 2.94 inches, +2.21 inches; Texas area, 0.77 inch, −1.71 inches; Oklahoma, 1.17 inches, −1.88 inches; Arkansas, 2.84 inches, −0.77 inch; Tennessee area, 4.32 inches, +1.28 inches; Mississippi area, 4.12 inches, +1.34 inches; Louisiana, 4.97 inches, +1.21 inches.

TEMPERATURE.

The mean temperature was about normal, or above, over Oklahoma, the Mississippi, Tennessee, Kentucky, Kansas, and Texas areas, and the Missouri area, except in the central portion, and was below the normal elsewhere. The greatest excess in temperature, amounting to more than 3°, occurred over northeastern Oklahoma and northwestern Arkansas and the southeastern portion of the Kansas and the southwestern portion of the Missouri areas; elsewhere, the excess ranged from 0.3° to 2.7°. Over those portions of the district where the mean temperature was below the normal, the departures ranged from 2.1° in the Colorado area to 0.1° in that portion of Louisiana lying to the north of Lake Pontchartrain.

The highest monthly mean temperature was 81.4°, at Liberty Hill, Bienville Parish, La., and the lowest was 44.0°, at Lake Moraine, El Paso County, Colo. The maximum temperature for the month was above 95° throughout the district, except in the mountainous portions of the Colorado and New Mexico areas. The monthly maximum reached, or exceeded, 100° at some stations in each State in the district, and in Oklahoma, Arkansas, Louisiana, and the Texas area the maximum was above 100° at practically all stations. The highest temperature recorded in the district was 107° at Ashland, Clark County, Kans., Chickasha, Grady County, and Muskogee, Muskogee County, Okla. Maximum temperatures of 106° were recorded at a number of stations in Kansas, Oklahoma, Arkansas, and the Texas areas. The average of the daily maximums exceeded 90° in portions of Oklahoma, Arkansas, Louisana, and the Kansas and Texas areas. The monthly maximum temperatures occurred generally from the 1st to 3d, although in some scattered localities the maximum occurred as late as the 12th.

The monthly minimums occurred generally during the last decade, and were recorded at a majority of stations in the western portion of the district on the 22d or 23d, and in the eastern portion on the 27th or 28th. The lowest temperature recorded, 14°, occurred at Elizabethtown, Colfax County, N. Mex. Minimum temperatures of 40°, or lower, were recorded at some stations in all parts of the district, and minimums below 32° were recorded over some localities in Oklahoma and Arkansas and in the Colorado, Kansas, and Missouri areas. Killing frost occurred in the mountainous portions of Colorado and New Mexico on several dates, and in Boone and Clark counties, Ark., on the 28th. Light frost occurred on the 27th, 28th, or 29th in portions of Oklahoma and Arkansas, and the Kansas, Missouri, and Texas areas. The percentage of sunshine during the month was somewhat above the seasonal average.

PRECIPITATION BY DRAINAGE AREAS.

Arkansas River and tributaries.—Heavy precipitation occurred over the headwaters of the Arkansas, in Colorado, where the amounts ranged from 1.34 inches at Holly, in the plains portion, to 7.47 inches at Santa Clara near the headwaters of the Cuchara River in the elevated portion of the Colorado area and the average was 3.4 inches, being about 2.3 inches in excess of the September normal. From the Colorado line eastward to the ninety-seventh meridian, the precipitation in the Valley of the Arkansas proper, ranged generally, between 1.5 and 3 inches, the average being about 2 inches, which is about 0.3 inch below the normal. One station, Ellinwood, Kans., reported 5.70 inches and six stations reported less than 1 inch. Except in a few widely scattered localities, dry weather prevailed throughout the Cimarron Valley, the rainfall ranged from 0.40 inch to 4.05 inches, and the average for the valley was about 1.5 inches. Three stations reported an excess, and all others reported a deficiency ranging generally from 1 to 2 inches, the average being about 1 inch. Generally heavy precipitation occurred over the headwaters of the Canadian in New Mexico, but elsewhere throughout the Canadian Valley the precipitation was light. Over the part of the valley in New Mexico, the precipitation ranged generally from 2 to 5 inches, and was from 1 to 3 inches above the normal. Over the stretches of the Canadian that lie in Texas and Oklahoma, the precipitation averaged about 1 inch, and there was a deficiency of about 2 inches. The rainfall was unevenly distributed over the Verdigris and Neosho valleys and that part of the Arkansas proper between the ninety-seventh meridian and the Arkansas line; the amounts ranged from 0.02 inch to 4.63 inches, the average being about 1.5 inches, about 2 inches below the normal. Over that portion of the Arkansas Basin, in Arkansas, the precipitation averaged 1.6 inches, and was 1.7 inches below the normal. The amount increased from 0.38 inch at Fort Smith to more than 3 inches near its junction with the Mississippi.

Red River and tributaries.—There was less than half an inch of precipitation generally over that portion of the Red River that lies in Texas and Oklahoma, except that moderately heavy amounts were recorded in the Texas Panhandle. The amounts ranged from a trace to 2.05 inches; averaged about 0.5 inch, and the deficiency was about 2 inches. Southward, in Arkansas and Louisiana, the precipitation increased from 0.48 inch to more than 3 inches and the departures from the normal ranged from a deficiency of 2.10 inches at Texarkana, Ark., to an excess of 0.69 inch at Alexandria, Louisiana.

Mississippi, South of St. Louis and small tributaries.—

Throughout this drainage area, the monthly amounts of precipitation were quite uniformly distributed, and ranged from 2.51 inches to 8.36 inches; the average was about 4 inches, or 0.5 inch above the normal. There was a general excess, exceeding 2 inches, at most stations in the immediate vicinity of the Mississippi. Over the Yazoo and Big Black valleys, the precipitation ranged from 2.51 inches to 5.79 inches, the average being 3.6 inches, or about 0.9 inch above the normal. In the Valley of the Ouachita the monthly amounts ranged from 0.84 inch near the headwaters in Arkansas to 4.33 inches at the mouth in Louisiana, the average being 2.54 inches. Over the headwaters of the Meramec and over the upper portion of the drainage basin of the White the precipitation was below the normal. There was a deficiency to the east of the headwaters of the Black, and over the greater portion of the Ouachita Basin.

Louisiana coastal plain.—The precipitation ranged from 4 to more than 10 inches over the eastern and middle portions, and from 2.94 inches at Jennings to 4.23 inches at Lake Charles in the western portion of the coastal plain. There was an excess, except at a few scattered stations, and at several stations the excess was between 4 and 6 inches. The rainfall was heavy but mostly occurred during the tropical storm of the 20th–21st, which passed inland between New Orleans and Morgan City.

A full discussion of this storm is given elsewhere in the REVIEW.

RIVERS.

The Arkansas and its tributaries remained low during the month, except that there were more moderate floods at the extreme headwaters of the Arkansas and the Canadian. The damage from flood waters was comparatively small in Colorado, but over the northern half of the New Mexico area nearly every locality reported local damages and delays in railroad traffic. The lowest stage at Fort Smith, Ark., was 1.4 feet on the 1st, the highest was 6.6 feet on the 13th, and at the close of the month the stage was 2.5 feet. The changes in the Arkansas were slight at Little Rock, where the stage was 1.3 feet at the opening and 1.1 feet at the close of the month. The lowest stage during the month was 1.0 foot on the 9th, and the highest was 3.5 feet on the 17th.

The Red River fell generally during the month, except that there were a few local rises. The stage at Arthur, Tex., was 6.2 feet at the opening of the month and the water fell slowly to 4.6 feet on the 23d and 24th, after which there was a rise to 5.6 feet on the 27th, and at the close of the month the stage was 4.8 feet. The range at Fulton, Ark., was from 6.5 feet on the 1st to 4.8 feet on the 27th to 29th. The range at Shreveport was from 2.1 feet on the 1st to −4.0 feet on the 30th. The changes at Alexandria were very slight, and the range was from 0.9 foot on the 4th and 7th to −0.2 foot on the 30th. The rivers and smaller streams in Oklahoma were low, except that there was a temporary rise in the South Canadian during the latter part of the first decade. The Ouachita remained nearly stationary at Camden, and at Monroe the range was from −0.5 foot on the 1st to −2.3 feet on the 27th.

The lower Mississippi changed very little, but there was a fall generally from St. Louis southward to the Gulf. The highest stage from Memphis to Donaldsonville occurred at the opening of the month and the lowest on the 30th. Slight, but unimportant rises occurred on a few dates at New Orleans where the river oscillated to some extent as a result of wind tides. The highest stage was 7.8 feet on the 20th and the lowest 4.2 feet on the 30th.

NOTES.

As a result of the excessive precipitation in New Mexico during the first decade in September, the Canadian at Logan, N. Mex., rose on September 6 from 5 feet at noon to 25 feet at 6 p. m., and the crest of the flood was higher than 25 feet. The river carried more than 10,000 second-feet of water during the height of the flood.

The stages of the streams in Oklahoma were unusally low during the month and this resulted in an inadequate water supply. The means of securing water for domestic purposes and fire protection was a serious problem in a number of the smaller cities. These conditions emphasize the necessity for action to provide for the conservation of the water supply in anticipation of such droughts.

River transportation was practically suspended on the Arkansas, the White, the Red, and the Ouachita rivers because of the low stages of those streams.

"Hot winds" occurred in the southeastern counties of Kansas on September 3.

SPECIAL REPORT ON THE HURRICANE OF SEPTEMBER 20–21, 1909, ON THE LOUISIANA AND MISSISSIPPI COASTS.

The hurricane which moved northward over Louisiana and Mississippi, September 20–21, 1909, was of the greatest geographic extent and probably the most severe storm that has been experienced on the central Gulf coast.

WEATHER CONDITIONS AT NEW ORLEANS PRECEDING AND DURING THE HURRICANE.

September 18.—The pressure was quite uniform, ranging from 29.91 to 29.97 inches. The wind was light with the prevailing direction northeast until 5 p. m., and east, except for a short intervals, from that hour until midnight. The temperature averaged 4° above the normal and ranged from 76° to 88°. The day was partly cloudy with cirrus and cirro-stratus clouds moving from east or northeast during the greater part of the day, but occasionally from the north. Polar bands tinged with pink were observed at 7 p. m.

September 19.—Very little change in pressure conditions took place until the afternoon when the barometer began falling slowly; at 10 p. m. a more rapid fall set in. The temperature averaged 3° above the normal and ranged from 77° to 85°. The wind was steady from the northeast during the twenty-four hours, the velocity increased steadily from a light wind in the morning until noon, after which it blew generally at a rate of 18 to 20 miles per hour, the maximum velocity being at the rate of 28 miles per hour from the northeast at 12.55 p. m. Cirro-stratus clouds prevailed during the forenoon with some cumulus and alto-stratus during the afternoon. Rain fell at intervals commencing at 4:55 p. m. About sunset the clouds were tinged with a brilliant carmine glow lasting from 5:50 to 6:30 p. m., being most pronounced at 6:10 p. m.

September 20.—The barometer fell at a steady and uniform rate from 29.80 at midnight of the 19th to 29.63 at 10 a. m., after which the decrease in pressure was more pronounced and was at a uniform rate of nearly one-tenth of an inch in two hours until 7 p. m. when the lowest reading, 29.23 inches, was recorded. The lowest temperature during the day, 74°, occurred at 1 p. m., and the highest recorded during the twenty-four hours was 79°. The wind was from the northeast until 8 a. m., coming in sudden gusts ranging in velocity from 22 to 42 miles per hour, a rate of more than 30 miles per hour being recorded in some five-minute period of every hour after 1 a. m. From 8 to 9 a. m., the wind blew from all directions, not continuously from any one direction during a period of five minutes; during this hour the wind lulled and the velocity was uniformly about 16 miles per hour. From 9 to 10 a. m., the wind blew steadily from the northeast and the velocity nearly doubled over that of the preceding hour with a maximum at the rate of 40 miles per hour at 9:53 a. m. From 10 a. m. until noon the wind was variable blowing from all directions not remaining from any one direction during a period of more than five minutes. The wind lulled again during this time and the velocity ranged from 12 to 24 miles per hour. From 12 noon until 3 p. m. the wind oscillated between northeast and southeast, being mostly east, and the hourly wind velocity ranged from 25 to 33 miles per hour, the maximum for five minute periods being for each hour at the rate of 31, 37, and 40 miles, respectively. From 3 to 4 p. m., the wind was mostly from the east, but occasionally from

the southeast with increasing velocity, the total movement for the hour being 39 miles with a five-minute maximum at the rate of 46 miles per hour. From 4 until 5:20 p. m., the wind veered toward the southeast after which it remained steady from the southeast until 10:45 p. m., when it veered to the south. The wind velocity increased as the wind settled into the southeast, with an hourly movement from 4 to 5 p. m. of 45 miles, and for a five-minute period it was at the rate of 58 miles per hour; from 5 to 6 p. m the hourly movement was 49 miles and the maximum for five minutes was at the rate of 62 miles per hour; from 6 to 7 p. m., the hourly movement was 55 miles and the maximum for five minutes was at the rate of 66 miles, this being 6 miles greater than the highest wind previously recorded at New Orleans. After 7 p. m the wind subsided slowly, but storm velocities occurred at intervals until about midnight. The wind was freaky, blowing at all times during the day in sudden powerful gusts or blasts limited to narrow areas and requiring but a few seconds of time in passing a given place. These sudden gusts or blasts were of much greater velocity than the highest five-minute record. Low, heavy clouds, from which rain fell incessantly, moved rapidly from the northeast during the forenoon and from the east and southeast during the afternoon. The rainfall was heaviest from 12 noon to 1 p. m., when 1 inch fell, there being no other hour during the day with one-third that amount.

September 21 was clear and pleasant, with light wind from the south.

EFFECTS OF THE HURRICANE.

The center of the hurricane moved inland between the mouth of the Mississippi and the Atchafalaya rivers, as forecast by the Weather Bureau. The wind at Morgan City backed from the northwest, by the west, to the south, while at New Orleans it veered from the northeast, by the east, to the south. The center of the disturbance moved northward over eastern Louisiana, passing about halfway between New Orleans and Morgan City. Excessively high tides occurred in the eastern segment of the hurricane, flooding all the lowlands on the middle Gulf coast to a depth ranging from 2 to 10 feet. At New Orleans the back water in the river, as a result of the storm tide, was 4 feet on the afternoon of the 20th. The storm winds carried the water from the Gulf of Mexico northward, east of the Mississippi River over Breton Sound, eastern Plaquemines, St. Bernard, and Orleans parishes into Lake Pontchartrain, giving the highest tide water ever known in those sections. Reports from the north shore of Lake Pontchartrain indicate that the tide had risen 4 feet up to 7 p. m. on the 20th, when it remained stationary for nearly an hour. From 8 to 10 p. m. there was a storm wave of 3 feet, making a total tide in that section of 7 feet. The water commenced receding about midnight. A break in the protection levee on Bayou St. John near the Dumaine Street Bridge allowed the water from Lake Pontchartrain to flow through and flood a large area, in the western portion of New Orleans, to a depth ranging from 1 to 2 feet. The highest storm tide occurred between the mouth of the Mississippi River and the Mississippi Sound, about 50 miles east of the storm center. The occurrence of the highest tide in this part of the storm and so far from the center was, no doubt, due to the fact that the storm was moving northwest until it reached the Louisiana coast, and then curved more to the northward. Reports from Grand Isle, which was near the center of the storm, indicate a tide of about 4 feet in that section as the highest water on that island was but 2 feet. From the Atchafalaya River westward, the northerly winds held the tides down; however, the winds were high and dangerous as far west as Galveston, Tex.

Much damage resulted from the storm along the middle Gulf coast, and for some distance inland. At New Orleans five persons were killed either by falling chimneys or coming in contact with live wires broken by the wind, and the property damage is estimated at about $1,000,000, the greater part of which was along the river front, mainly from the sinking of barges loaded with coal. Small craft were torn from their moorings in harbors and suffered much damage.

More than half the coal fleet along the Mississippi River was sunk. The railroads suffered severe damage. The Louisville and Nashville Railroad lost 25 miles of track, and the bridges at Rigolets and at Bay St. Louis were partly destroyed. The Illinois Central Railroad lost 8 miles of double track and several bridges. Other roads suffered to some extent, but no reports of the extent of their damage has been received. Telephone and telegraph wires in all directions were prostrated, there being but one wire left in operation out of New Orleans, a telephone line to Hattiesburg, Miss. The wireless towers were all blown down. The Western Union Telegraph Company opened a wire by the way of Dallas, Tex., on the 22d and this was followed by other wires on the 23d and 24th, and on the 25th a good telegraph service was restored. The damage suffered by the railroad, telegraph, and telephone companies will probably exceed $1,000,000. Many towns for some distances inland suffered heavy damage. Agricultural interests in Louisiana suffered less than was at first anticipated, and the damage to crops will probably not far exceed $1,000,000. The total damage in Louisiana and Mississippi is estimated at about $5,000,000. Nearly 200 persons are known to have perished in Terrebonne Parish and about 50 deaths occurred as a result of the storm in other portions of Louisiana and Mississippi. The exact loss of life will never be known, but a conservative estimate places the total number of deaths at about 350. Nearly 4,000 people were rendered homeless, the bulk of these being in Terrebonne Parish. The coast region of Terrebonne Parish is cut up by numerous bayous, and 2,000 or 3,000 fishermen live along these sluggish streams. Houma is the nearest telephone exchange, and people living several miles south of that place are without rapid means of communication and could not be reached by warnings.

When it is taken into consideration that dangerous winds occurred from Tampa, Fla., on the east to Galveston, Tex., on the west, over a long stretch of low coast, and at New Orleans the wind velocity exceeded all previous storms, the small loss of life is phenomenal when compared with that resulting from previous storms in this section. It is a notable fact that no loss of life resulted from drowning in the neighborhood of the storm-warning display stations of the Weather Bureau, which establishes the fact that the warnings were effectual in the saving of life. Four-fifths of the deaths that resulted from the storm occurred in a portion of Terrebonne Parish that could not be reached with the warnings, and many of the remaining number resulted indirectly from the storm in a manner that no warnings could have prevented their occurrence. Under the guidance of the warnings of the Weather Bureau, all of the small craft that could be reached had sought harbors and prepared to weather the storm. The coal fleet anchored along the banks of the Mississippi kept up steam commencing Saturday night and they were advised Sunday, in conversation over the telephone, to keep in readiness for the storm. About half the fleet was sunk, but the remaining half was saved as a direct result of the action taken on the advice of the Bureau. No loss of life occurred on the high seas, because all the craft not strong enough to weather severe storms heeded the warnings and remained in port. The only casuality reported was that of the steamer *Utstein*, which was stranded in 7 feet of water just west of the Ship Shoal lighthouse. The *Utstein* was bound from Spanish Honduras for New Orleans with a cargo of fruit. None of the crew was lost. There was some loss of life on small craft that had sought refuge in the bays and bayous, but these people had sought what they deemed safe harbors. It is not possible to estimate to what extent lives and property were saved as a result of the warnings, but judging from action taken

it can safely be said that the number of lives and the amount of property saved greatly exceed the losses.

COMMENTS ON WORK OF WEATHER BUREAU.

The following comments on the warnings have been received:

The Daily Picayune, New Orleans, La., September 22, 1909, says:

It must be said to the credit of the Weather Bureau that the excellent work done has proven of incalculable benefit to life and property by the issuance of timely warnings of the storm. On Wednesday of last week the Weather Bureau began to give out bulletins as to the location of the tropical hurricane and its probable trend, and this warning note never ceased from day to day until the crucial moment, Monday morning, when the definite warning was issued, telling about the very near approach of the disturbance threatening south Louisiana and probably having some sinister design upon the city of New Orleans. The storm reached this city about the time foreforecasted by the Weather Bureau, and it lasted until nearly midnight Monday.

In commenting editorially on the storm, the Daily Picayune of September 25, 1909, says:

The admirable arrangements made by the weather service insures ample warning of the approach of these West Indian storms, but there is little that can be done to protect property from their ravages. That the timely warnings save many lives is, however, undoubted, and were the people who live in exposed stretches of the coast to pay greater attention to these warnings the loss of life would be still more reduced. Sailors who go to sea carefully note the weather predictions and are guided thereby, whereas the people living on the low-lying coast, who have actually more to fear than the sailors, usually pay less heed to the storm predictions.

The following extracts from letters received convey the general tenor of public feeling toward the work performed by the Bureau:

MORGAN CITY, LA., *September 24, 1909.*

The storm warnings were timely and were the means of saving life and property. Boatmen who were prepared to sail were advised and took timely warning, thus being able to save their property.

(Signed) M. COGUENHEM.

NEW ORLEANS, LA., *September 22, 1909.*

We write to express our appreciation for the excellent and courteous service which your office furnished to us during the uncertain hours of the recent storm. We feel that your office was solely instrumental in saving to New Orleans, through advices sent out by you in advance, many lives and thousands of dollars worth of property.

We can doubly assure you that many people in New Orleans were given encouragement throughout the height of the storm by information given out during its fury.

(Signed) CASTELL & TREFNEY.

TABLE 1.—*Climatological data for September, 1909. District No. 7, Lower Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Blaine	Baca	3,935	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. M. Meyers.
Buena Vista	Chaffee	7,955	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. D. Bowen.
Calhan	El Paso	6,700	2	56.4	.....	82	1†	31	22	39	5.22	.....	1.41	0.5	12	18	6	6	se.	H. B. Rice.
Canon City	Fremont	5,326	21	66.0	+ 1.2	93	2	39	23	39	3.34	+ 2.68	1.25	0.0	8	9	17	4	e.	Thomas J. Tynan.
Colorado Springs	El Paso	6,098	30	57.5	− 1.9	84	2	32	23	37	4.63	+ 3.59	1.08	0.0	10	18	7	5	.....	Colorado College.
Cripple Creek	Teller	9,396	9	.....	.....	.....	.....	.....	.....	.....	3.72	.....	1.16	6.0	9	.....	.....	.....	.....	F. G. Willis.
Cuchara Camps	Huerfano	8,200	.....	.....	.....	.....	.....	.....	.....	.....	3.05	.....	0.88	2.0	6	23	3	4	sw.	George A. Mayes.
Eads	Kiowa	4,209	2	67.6[a]	.....	95	1	40	5†	50	1.37	.....	1.37	0.0	1	.....	.....	.....	se.	W. H. Lauck.
Fairview	Custer	9,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Elizabeth L. Gray.
Florence	Fremont	5,185	.....	68.4	.....	95	2	44	14†	40	2.85	.....	1.65	0.0	5	23	0	7	se.	W. G. Fish.
Garfield	Chaffee	9,510	.....	.....	.....	.....	.....	.....	.....	.....	3.61	.....	2.15	6.0	12	11	15	4	.....	Lloyd N. Felton.
Glen Eyrie	El Paso	6,500	17	56.7	− 2.3	85	2	29	23	43	3.46	+ 2.38	0.95	0.0	9	18	9	3	w.	C. Nickell.
Hamps	Elbert	5,400	16	55.9	− 2.7	84	2	30	23†	44	2.34	+ 1.43	0.66	0.0	8	20	4	6	s.	W. Hamp.
Hermit Lake	Custer	10,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hoehne (near)	Las Animas	5,700	17	59.9	− 2.4	92	2	25	23	59	3.12	+ 1.90	0.80	0.0	9	23	1	6	w.	S. W. DeBusk.
Holly	Prowers	3,380	14	68.2	− 0.3	99	1	34	29	52	1.34	− 0.12	1.10	0.0	4	23	3	4	se.	R. I. Arneson.
Lake Moraine	El Paso	10,265	15	44.0	− 3.5	66	2	19	22	32	3.90	+ 2.44	0.75	7.8	13	11	11	7	nw.	Joseph Strong.
Lamar	Prowers	3,592	19	68.1	− 0.6	100	1	37	28	47	2.32	+ 1.10	1.23	0.0	4	23	5	2	w.	J. T. Lawless.
Las Animas	Bent	3,899	41	67.0	+ 1.3	98	1†	37	23	56	2.72	+ 1.74	1.07	0.0	6	17	0	13	se.	F. M. Tague.
La Veta Pass	Costilla	9,000	.....	.....	.....	.....	.....	.....	.....	.....	3.07	.....	1.22	2.0	7	11	14	5	w.	Norvin B. Lively.
Leadville	Lake	10,248	13	46.4	− 2.1	68	28	17	22	35	2.84	+ 2.13	1.10	T.	10	.....	.....	.....	.....	U. S. Weather Bureau.
Limon (near)	Elbert	5,360	2	58.3	.....	87	1†	32	22	44	2.23	.....	0.62	0.0	7	21	5	4	se.	John Lesher.
Marshall Pass	Saguache	10,846	6	.....	.....	.....	.....	.....	.....	.....	2.71	.....	1.00	0.0	7	18	6	6	w.	W. D. Lillard.
North Lake	Las Animas	8,700	.....	.....	.....	.....	.....	.....	.....	.....	4.18	.....	1.25	0.5	10	17	7	6	w.	Guy H. Crane.
Pueblo	Pueblo	4,734	21	62.6	− 1.8	92	2	36	23	39	3.93	+ 3.55	2.10	0.0	7	23	3	4	nw.	U. S. Weather Bureau.
Rockyford (near)	Otero	4,177	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. K. Blinn.
St. Elmo	Chaffee	9,500	.....	.....	.....	.....	.....	.....	.....	.....	3.53	.....	1.33	T.	8	22	4	4	w.	Daniel Clark.
Salida	....do	7,035	11	55.8	− 1.4	80	26†	25	23	50	2.74	+ 1.84	1.62	0.0	5	20	7	3	w.	M. D. L. Buell.
Santa Clara	Huerfano	8,250	14	55.0	− 0.4	81	1	29	22†	41	7.47	+ 5.56	4.65	1.0	10	14	12	4	.....	Lincoln Morris.
Sheridan Lake	Kiowa	4,065	8	67.8	.....	96	1	35	29	48	2.36	.....	1.31	0.0	5	26	4	0	se.	Howard Gamble.
Stonewall	Las Animas	8,000	3	.....	.....	.....	.....	.....	.....	.....	2.84	.....	1.60	T.	7	17	9	4	.....	J. W. Shouse.
Trinidad	....do	5,994	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.0	.....	18	7	5	.....	Mrs. Maggie Butler.
Victor (near)	Teller	10,100	5	50.0	.....	73	3	25	5	40	3.60	.....	0.73	5.7	11	19	6	5	n.	Fred Jones.
Vilas	Baca	3,935	19	.....	.....	.....	.....	.....	.....	.....	4.59	+ 3.07	2.89	0.0	6	19	7	4	sw.	Carrie Konkel.
Westcliffe	Custer	7,864	15	52.6	− 1.5	78	1†	19	23	50	2.30	+ 0.96	1.46	2.0	8	13	9	8	nw.	Zack Jordan.
Winfield	Chaffee	9,765	.....	.....	.....	.....	.....	.....	.....	.....	2.71	.....	1.40	2.5	11	7	16	7	w.	John G. Payne.
Wortman	Lake	11,250	9	.....	.....	.....	.....	.....	.....	.....	3.77	+ 2.60	1.30	22.0	5	20	3	7	.....	George C. Wortman.
New Mexico.																				
Abbott	Mora	5,771	.....	.....	.....	.....	.....	.....	.....	.....	3.35	.....	2.45	0.0	3	19	8	3	nw.	Agt. E. P. & S. W. Ry.
Albert	Union	4,709	19	68.7	− 1.0	98	2	42	23	37	4.86	+ 2.91	2.15	0.0	5	23	5	2	s.	Andrew Knell.
Arch (near)	Roosevelt	.....	.....	66.5[b]	.....	90[a]	3	39[b]	27	40[b]	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. A. Elliott.
Aurora	Colfax	8,849	.....	.....	.....	.....	.....	.....	.....	.....	3.81	.....	2.65	0.0	9	12	12	6	nw.	Miss Juanita Lucero.
Bell Ranch	San Miguel	4,500	5	67.6	.....	98	2	37	27	50	3.20	.....	1.71	0.0	8	21	8	1	sw.	C. M. O'Donel.
Black Lake	Colfax	8,348	.....	.....	.....	.....	.....	.....	.....	.....	2.37	.....	1.61	0.0	6	20	7	3	w.	Ralph T. Martines.
Cabeza	San Miguel	5,406	.....	.....	.....	.....	.....	.....	.....	.....	3.45	.....	1.67	0.0	6	19	7	4	se.	Agt. E. P. & S. W. Ry.
Campana	....do	4,493	.....	.....	.....	.....	.....	.....	.....	.....	2.69	.....	0.87	0.0	6	17	10	3	nw.	Do.
Chacon	Mora	9,000	.....	.....	.....	.....	.....	.....	.....	.....	1.06	.....	0.55	2.2	3	20	7	3	w.	Alfred Lucero.
Cimarron (near)	Colfax	6,385	4	59.1	.....	86	1†	32	23	43	3.74	.....	3.26	0.0	7	17	7	6	se.	Wm. French.
Clayton	Union	5,178	5	65.0	.....	95	1	37	23	34	2.06	.....	1.02	0.0	3	22	7	1	nw.	Dr. W. W. Chilton.
Cuervo	Guadalupe	4,849	.....	.....	.....	.....	.....	.....	.....	.....	1.14	.....	0.30	0.0	7	.....	.....	.....	.....	Agt. E. P. & S. W. Ry.
Dawson	Colfax	6,396	.....	.....	.....	.....	.....	.....	.....	.....	2.30	.....	2.20	0.0	4	18	4	8	.....	Do.
Dorsey (near)	....do	6,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo T. Lambert.
Elizabethtown	....do	8,465	3	49.4	.....	75	2	14	22	52	0.99	.....	0.82	T.	4	20	7	3	w.	Miss Mabel Carrington.
Fort Union	Mora	6,835	40	55.8	− 5.0	85	2	26	23	48	3.37	+ 1.03	1.45	0.0	6	22	6	2	sw.	M. C. Needham.
Hayden	Union	4,444	.....	66.2	.....	91	9	40	22†	40	2.53	.....	1.67	0.0	3	21	5	4	se.	George L. Cook.
Lake Alice	Colfax	7,160	.....	.....	.....	.....	.....	.....	.....	.....	4.03	.....	1.00	0.0	6	.....	.....	.....	.....	Raton Water Co.
Logan	Quay	3,851	3	69.5	.....	98	1†	37	28	52	2.43	.....	1.20	0.0	5	22	7	1	s.	John B. Reneau.
Los Alamos	San Miguel	6,789	5	.....	.....	.....	.....	.....	.....	.....	2.56	.....	1.16	0.0	4	.....	.....	.....	.....	Wm. Frank, sr.
Maxwell (near)	Colfax	5,894	3	.....	.....	.....	.....	.....	.....	.....	3.55	.....	1.47	0.0	7	.....	.....	.....	.....	D. N. Jackson.
Melrose	Curry	4,400	1	66.8	.....	92	2†	35	28	48	2.11	.....	0.90	0.0	4	25	2	3	sw.	Dr. F. A. White.
Miami Ranch	Colfax	6,000	2	58.8[b]	.....	87[b]	2	28[b]	23	45[b]	4.23	.....	3.33	0.0	5	17	10	3	w.	Farmers' Devel. Co.
Montoya	Quay	4,335	.....	.....	.....	.....	.....	.....	.....	.....	2.13	.....	1.46	0.0	4	27	0	3	s.	Agt. E. P. & S. W. Ry.
Nara Visa	....do	4,225	4	66.6[b]	.....	93	3	43	23[d]	38[d]	2.19	.....	0.85	0.0	6	21	6	3	s.	Willard Belknap.
Raton	Colfax	6,660	12	60.0	− 1.2	88	1†	32	23	41	6.30	+ 4.49	2.40	0.0	10	21	8	1	w.	Prof. R. C. Crum.
Rociado	San Miguel	8,200	6	54.6	.....	80	1	27	27	47	2.06	.....	1.27	0.0	4	17	9	4	.....	Chas. F. Rudolph.
Roy	Mora	5,884	.....	.....	.....	.....	.....	.....	.....	.....	5.26	.....	4.06	0.0	5	14	0	6	w.	Agt. E. P. & S. W. Ry.
San Jon	Quay	4,200	3	68.4	.....	96	2	38	23	40	1.94	.....	0.84	0.0	6	24	2	4	sw.	Jessie T. White.
Salano (1)	Mora	5,622	.....	63.2	.....	91	2	34	23	41	4.15	.....	2.30	0.0	6	22	4	4	s.	F. M. Hughes.
Salano (2)	....do	5,622	.....	.....	.....	.....	.....	.....	.....	.....	4.06	.....	2.30	0.0	4	15	12	3	s.	Agt. E. P. & S. W. Ry.
Springer	Colfax	5,857	14	60.2[a]	− 2.6	90[a]	1†	30[a]	23†	50[a]	2.50	+ 1.09	1.80	0.0	4	21	7	2	.....	Agt. A. T. & S. F. Ry.
Taylor	....do	5,661	.....	.....	.....	.....	.....	.....	.....	.....	3.65	.....	2.00	0.0	5	20	5	5	se.	Agt. E. P. & S. W. Ry.
Trementina	San Miguel	.....	2	.....	.....	.....	.....	.....	.....	.....	5.67	.....	3.80	0.0	6	18	11	1	s.	Miss Alice Blake.
Tucumcari (1)	Quay	4,194	5	71.1	.....	97	2	40	23	42	0.85	.....	0.42	0.0	4	25	5	0	s.	John F. Seaman.
Tucumcari (2)	....do	4,194	.....	.....	.....	.....	.....	.....	.....	.....	0.77	.....	0.39	0.0	5	20	9	1	sw.	Agt. E. P. & S. W. Ry.
Vermejo Park	Colfax	7,600	6	56.4[b]	.....	81[a]	2	32[a]	8	46	2.20	.....	1.37	0.0	5	13	10	7	w.	H. W. Adams.
Wagon Mound (near)	Mora	6,300	1	58.3	.....	89	2	28	23	41	2.31	.....	1.49	0.0	4	19	4	7	sw.	Guy L. Barnes.
Texas.																				
Amarillo	Potter	3,676	17	69.4	+ 1.7	95	2	45	23	40	2.19	− 0.17	1.49	0.0	4	18	11	1	s.	U. S. Weather Bureau.
Arthur	Lamar	590	17	.....	.....	.....	.....	.....	.....	.....	0.99	− 1.49	0.73	0.0	3	.....	.....	.....	.....	J. H. Hodnett.
Bonham	Fannin	566	6	77.2	.....	105	10†	34	28	50	T.	.....	T.	0.0	0	19	11	0	e.	B. S. Lovelace.
Canadian	Hemphill	2,339	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. M. Vance.
Channing	Hartley	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. F. Land Inv. Co.
Childress	Childress	1,869	16	75.8[c]	+ 3.0	103[c]	4	50[c]	23	38[c]	1.04	− 1.61	0.67	0.0	3	22[c]	1[c]	4[c]	s.	W. E. Davis.
Chillicothe	Hardeman	1,406	1	.....	.....	.....	.....	.....	.....	.....	0.26	.....	0.18	0.0	2	.....	.....	.....	.....	A. B. Conner.
Clarendon	Donley	2,719	4	72.2	.....	100	2	40	28	44	0.60	.....	0.60	0.0	1	19	11	0	se.	J. B. McClelland.
Clarksville	Red River	442	4	80.5	.....	105	10	45	30	41	T.	.....	T.	0.0	0	23	7	0	.....	J. W. O'Neill.
Claude	Armstrong	3,397	4	.....	.....	.....	.....	.....	.....	.....	0.47	.....	0.47	0.0	1	.....	.....	.....	.....	Agt. F. W. & D. C. Ry.
Dalhart	Dallam	3,998	4	65.8	.....	98[a]	2	36	23	42	2.12	.....	0.81	0.0	7	19	9	2	s.	F. L. Kennard.
Denison	Grayson	.....	1	.....	.....	.....	.....	.....	.....	.....	0.38	.....	0.38	0.0	1	.....	.....	.....	.....	Wm. S. Faires.
Henrietta	Clay	915	14	77.3	0.0	102	11	38	29	60	0.28	− 2.20	0.28	0.0	1	28	0	2	s.	C. K. Brown.
Hereford	Deaf Smith	3,750	4	67.6	.....	96	1†	35	27	50	1.50	.....	1.50	0.0	1	22	8	0	s.	A. C. Elliott.
Higgins	Lipscomb	2,760	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. D. Shaw.
McLean	Gray	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. R. Patterson.
Memphis	Hall	2,067	4	75.6	.....	99	1†	45	24	42	0.88	.....	0.88	0.0	1	26	4	0	.....	Agt. Ft. W. & D. C. Ry.
Miami	Roberts	2,743	3	72.8	.....	102	2	41	23	44	1.76	.....	0.93	0.0	3	22	7	1	s.	Jerome Harris.
Mobeetie	Wheeler	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. A. Choate.
Nazareth	Castro	.....	3	70.0[a]	.....	95[a]	1	39[a]	27	45[a]	1.16	.....	0.75	0.0	4	23[a]	6[a]	0[a]	s.	P. A. Kalein.

TABLE 1.—*Climatological data for September, 1909. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Cont'd.																				
Ochiltree	Ochiltree		1								0.86		0.50	0.0	3					S. T. Allen.
Pampa	Gray	3,226		70.6		97	1†	40	15†	45	0.50		0.38	0.0	3					B. E. Finley.
Paris	Lamar	592	20	79.0	+ 2.7	106	11	46	28†	45	0.48	− 1.93	0.36	0.0	2	20	3	7	s.	N. O. Enloe.
Plemons	Hutchinson		2	68.6		100	2	35	23	53	1.14		0.61	0.0	5	22	8	0	s.	C. S. Solomon.
Quanah	Hardeman	1,563	4	76.0		101	10	46	27†	36	T.		T.	0.0	0	27	0	3	s.	E. E. Miller.
Sherman	Grayson	745	16	78.2	+ 0.7	100	10†	50	28	31	0.90	− 1.92	0.90	0.0	1	23	6	1	s.	R. A. Gibbs.
Sulphur Springs	Hopkins	530	17	79.2	+ 1.3	103	10	41	28	40	0.61	− 2.24	0.54	0.0	2	20	9	1		W. B. Baxter.
Texline	Dallam	4,694	4																	Agt. Ft. W. & D. C. Ry
Tulia	Swisher	3,501	11	70.2		102	9	37	29	50	0.60	− 2.08	0.60	0.0	1	15	15	0	s.	Lou Mulhall.
Wichita Falls	Wichita	958	4								0.50		0.50	0.0	1	22	0	8	s.	J. B. Nicholson.
Kansas.																				
Anthony	Harper	1,329	12	73.4		104	3	35	28	49	2.19	− 0.19	2.04	0.0	2	19	10	1	sw.	R. H. Beebe.
Ashland	Clark	1,951	2	73.6		107	2	37	28	50	2.57		1.92	0.0	6	24	6	0	s.	C. W. Carson.
Burlington	Coffey	1,010	16	71.6	+ 1.0	100	11	36	27	43	1.40	− 2.89	0.77	0.0	7	16	12	2	s.	A. W. Maxwell.
Chanute	Neosho	940	5	73.2		105	11	34	28	42	1.00		1.00	0.0	1	20	7	3	s.	Chase W. Brown.
Cimarron	Gray	2,700	3			97	11	37	29	49	1.20		1.20	0.0	1	18	4	2	se.	Fred Mallonee.
Coldwater	Comanche	2,090	11	72.8	+ 1.4	103	2	41	28	42	2.98	+ 0.72	2.27	0.0	7	22	5	3	s.	J. L. Stanley.
Columbus	Cherokee	898	19	72.7	+ 1.7	103	3†	37	27†	40	1.64	− 2.35	0.58	0.0	7	21	8	1	sw.	O. E. Skinner.
Coolidge	Hamilton	3,346	13	66.7	− 0.3	95	2	32	29	54	1.58	+ 0.08	1.38	0.0	2	20	5	5	se.	W. R. Padley.
Cottonwood Falls	Chase	1,234	5	71.0		99	12	34	28	47	0.63		0.32	0.0	7	21	4	5	s.	E. B. Greene.
Council Grove	Morris	1,191		68.2		96	13	32	28	48	1.09		1.06	0.0	3	26	0	4	se.	Geo. W. Cleek, jr.
Cunningham	Kingman	1,680	21	73.4	+ 2.6	105	2	38	27	48	3.70	+ 1.08	3.30	0.0	3	16	11	3	se.	W. H. Morton.
Dodge City	Ford	2,513	35	70.2	+ 2.0	100	3	45	27	38	1.50	− 0.27	0.87	0.0	6	19	9	2	se.	U. S. Weather Bureau
El Dorado	Butler	1,291	7	71.6		98	11	34	28	44	0.88		0.86	0.0	2	27	3	0	s.	W. Y. Miller.
Ellinwood	Barton	1,788	15	71.0	+ 2.0	98	11	40	28	47	5.70	+ 3.18	3.47	0.0	10	11	15	4	se.	Martin Musil.
Emporia	Lyon	1,138	25	71.6	+ 3.5	99	11	38	28	42	0.92	− 3.00	0.50	0.0	3	18	11	1	s.	W. H. Boyles.
Eureka	Greenwood	1,093	11	72.0		99	3†	35	27	43	0.98	− 3.17	0.92	0.0	2	22	5	3	s.	T. C. Peffer.
Fall River	do	925	13	72.7	+ 3.5	105	3	32	28	51	1.16	− 3.20	0.70	0.0	3	26	3	1	s.	J. McDaniel.
Fargo	Seward										1.50		1.01	0.0	4	14	11	5	s.	Frank Swink.
Fredonia	Wilson	864	6	74.4		103	3	39	27	43	1.75		0.70	0.0	5	23	5	2	nw.	B. W. Holmes.
Garden City	Finney	2,836	15	69.6	+ 0.2	100	1	38	29	45	1.20	− 0.76	0.80	0.0	3	21	5	4	s.	B. F. Stocks.
Great Bend	Barton	1,850																		J. A. Pritchard.
Greensburg	Kiowa	2,235	2	70.4		101	3	39	27	41	3.17		2.05	0.0	6	20	10	0	s.	C. C. Raymond.
Grenola	Elk	1,116	22	71.6	+ 1.3	99	3	35	28	46	2.23	− 1.45	2.10	0.0	3	24	4	2	s.	R. M. Lawyer.
Howard	do	1,112	2								3.24		2.79	0.0	2	26	0	4	ne.	J. W. Eby.
Hugoton	Stevens		5	69.9		100	1†	38	27	44	0.40	− 1.61	0.40	0.0	1	22	0	8	s.	J. A. Firmin.
Hutchinson	Reno	1,535	19	71.8	+ 1.5	100	2	33	28	52	1.03	− 1.95	0.83	0.0	6	22	5	3	sw.	E. S. Webster.
Independence	Montgomery	816	37	74.1	+ 1.9	102	3†	41	28	42	4.63	+ 0.85	1.45	0.0	6	19	4	7	s.	J. M. Altaffer.
Iola	Allen	984	3	71.8		99	11	36	28	42	1.72		1.05	0.0	5	15	11	4	ne.	U. S. Weather Bureau.
Jetmore	Hodgeman	2,268	8	70.0		99	3	40	24	47	3.25		1.85	0.0	6	15	11	4	s.	James Aikin.
Kingman	Kingman	1,504	1	72.6		102	2	36	28	48	1.73		1.61	0.0	2	13	15	2	sw.	B. B. Anawalt.
La Crosse	Rush	2,061	7	71.6[d]		102[d]	11	39[d]	24	45[d]	3.26		2.10	0.0	5	22	5	3	se.	Rodney Torrey.
Lakin	Kearney	2,993	19	67.4	− 0.9	99	1	35	28†	54	0.50	− 1.36	0.48	0.0	2	20	6	4	s.	C. H. Longstreth.
Larned	Pawnee	2,090	5	70.8		97	3†	39	26	45	3.83		2.26	0.0	6	19	10	1	sw.	H. H. Wolcott.
Lebo	Coffey	1,138	23	70.4	+ 0.8	96	11†	40	27†	38	3.17	− 1.07	2.65	0.0	6	18	7	5	sw.	J. J. Bowman.
Le Roy	do	990									1.96		0.97	0.0	4	21	2	7	s.	F. W. Schmitt.
Liberal	Seward	2,843	2	71.8		104	2	39	27	50	2.95		1.28	0.0	5	20	3	7	sw.	R. T. Nichols.
Macksville	Stafford	2,032	16	70.7	+ 2.0	99	3†	41	28	45	3.34	+ 1.13	2.60	0.0	4	18	4	8	se.	Mrs. Nelia Poling.
McPherson	McPherson	1,495	19	72.0	+ 1.9	101	11	40	23†	47	1.07	− 2.49	0.61	0.0	4	17	8	5	se.	Ed. F. Haberkein.
Madison	Greenwood	1,074	8	71.5[d]		100[d]	12	31[d]	29	60[d]	0.65		0.60	0.0	2	16	13	0	ne.	C. A. David.
Marion	Marion	1,310	15	70.6	+ 1.8	99	11†	35	28	46	0.64	− 2.64	0.46	0.0	5	14	16	0		D. D. McIntosh.
Medicine Lodge	Barber	1,475	16	72.2	+ 1.2	106	3	31	28	56	1.67	− 1.21	1.10	0.0	3	21	8	1	s.	S. P. Garrison.
Medora	Reno	1,480																		M. L. Rickenbrode.
Mt. Hope	Sedgwick	1,410	12								1.70	− 0.94	1.63	0.0	2	18	11	1	s.	H. N. Renfrew.
Neosho Rapids	Lyon	1,092	4								2.17		2.05	0.0	3	24	0	6	s.	J. E. McLeod.
Ness City	Ness	2,260	12																	J. K. Barnd.
Newton	Harvey	1,454	12			101	11†	34	28	53	0.77	− 2.52	0.50	0.0	5	25	5	0	s.	C. F. Walden.
Norwich	Kingman	1,496	13	74.6	+ 3.2	102	3	40	27	41	1.13	− 1.52	0.77	0.0	4	15	15	0	se.	N. I. Farris.
Oswego	Labette	899	18	75.0	+ 3.0	103	3†	38	28	42	1.12	− 2.50	0.67	0.0	3	16	13	1	sw.	Jas. M. Currigan.
Pratt	Pratt	1,950	14	70.9[b]	+ 1.3	104[b]	2	37[b]	27	44[b]	2.40	+ 0.04	2.25	0.0	2	21	8	1		E. H. Ellsworth.
Rome	Sumner	1,218	12	71.2	+ 0.2	96	3†	30	28	50	1.83	− 0.70	1.77	0.0	2	24	4	2	s.	D. M. Adams.
Sedan	Chautauqua	834	24	72.0	+ 0.3	101	4	34	28†	55	2.43	− 1.06	1.80	0.0	3	22	4	4	s.	A. Y. Buckles.
Toronto	Woodson	1,040	12	72.8	+ 1.7	101	3	33	28	56	1.70	− 3.68	0.90	0.0	3	23	0	7	s.	M. A. Webb.
Ulysses	Grant	3,027	15	68.6[a]	− 0.7	100[c]	11	40[a]	27†	48[a]	0.60	− 1.21	0.40	0.0	2	21	5	4	sw.	T. W. Marshall.
Walnut	Crawford	940	7	74.2		104	3†	36	28	48	1.42		0.77	0.0	3	25	5	0	se.	R. C. Harlan.
Wichita	Sedgwick	1,377	22	72.5	+ 2.7	96	3	44	27	36	1.77	− 1.36	1.69	0.0	3	16	11	3	se.	U. S. Weather Bureau.
Winfield	Cowley	1,124	12	70.6	− 0.1	96	3	35	28	40	3.35	+ 0.11	3.25	0.0	2	23	3	4	s.	M. B. Light.
Yates Center	Woodson	1,068	16																	J. W. Tipton.
Oklahoma.																				
Ada	Pontotoc	1,001	3																	Dr. J. P. McKinley.
Apache	Caddo		1	75.0[a]		104	10	37[a]	28	46	2.05		2.00	0.0	3	26	2	2	s.	G. D. Teeter.
Arapaho	Custer	1,575	16	74.1	+ 0.4	103	10	39	28	38	0.90	− 2.12	0.55	0.0	2	27	2	1	s.	Geo E. Marsh.
Ardmore	Carter	872	8	77.4		105	10†	41	28	46	0.23		0.15	0.0	2	22	4	4	s.	H. T. Nisbett.
Bartlesville	Washington		3	75.1		104	4	40	28	49	1.19		0.58	0.0	3	23	7	0	se.	Dr. A. P. Owens.
Beaver	Beaver	2,500	13	72.6	+ 1.2	105	2	40	27	46	1.52	− 0.76	0.68	0.0	5	23	5	2	se.	W. C. Frazer.
Blackburn	Pawnee	800	5	74.2		103	10†	31	29	63	0.83		0.65	0.0	3	29	1	0	se.	J. Landis.
Buffalo	Harper		3																	L. M. Brink.
Cache	Comanche	1,350	4	71.0		99	10	32	27†	46	1.70		1.41	0.0	2	24	5	1	s.	U. S. Forest Service.
Calvin	Hughes	713	5								0.43		0.20	0.0	4	24	1	5	n.	Thomas Purcell.
Chandler	Lincoln	865	6	74.6		103	10†	36	28	51	0.47		0.24	0.0	3	25	0	5	n.	Chas. L. Tuttle.
Chattanooga	Comanche	1,150	4	75.2[b]		103[d]	10	43	24	40	1.12		0.59	0.0	2	28	1	1	s.	Squire Humble.
Chickasha	Grady	1,091	9	77.0	+ 3.1	107	10	35	28	52	0.40		0.40	0.0	1	29	0	1	s.	J. C. Good.
Cloud Chief	Washita	1,400	9	76.0	+ 2.6	103	4†	37	28	49	1.42		0.77	0.0	2	22	6	2	sw.	J. P. Stutzman.
Dacoma	Woods	1,337	12	71.6	− 0.8	98	2†	39	27	47				0.0		25	5	0	sw.	N. A. Andress.
Durant	Bryan	643	9	76.9	+ 1.9	106	10	38	28†	51	0.26		0.14	0.0	3	23	5	2	n.	Nelson Houk.
Eldorado	Jackson	1,456	3	79.6		101	10	54	23	32	0.28		0.28	0.0	1	6	16	3	s.	R. D. Barnes.
Enid	Garfield	1,269	10	73.8	+ 0.3	102	3†	35	28	55	4.05		1.28	0.0	6	24	3	3	s.	Uri B. Worcester.
Erick	Beckham	2,058	6	74.9		102	10†	37	27	51	0.49		0.49	0.0	1	21	9	0	s.	Dr. J. D. Warford.
Fairland	Ottawa	839	10	75.8	+ 1.9	105	3†	35	27†	46	0.62	− 2.19	0.38	0.0	3	16	11	3	s.	C. W. Prier.
Fort Gibson	Muskogee	556	5								1.34		0.60	0.0	5	20	2	8	e.	John T. Welsh.
Frederick	Gillman	1,293	6	75.2		102	10	38	28	45	1.31		1.31	0.0	1	21	8	1	sw.	B. B. Bradley.
Gage	Ellis	2,136	7	72.3		103	2†	34	28	52	1.45		1.10	0.0	3	27	3	0	s.	C. H. Holmes.
Guthrie	Logan	1,000	7	75.4	+ 1.8	103	2†	37	28	49	3.95	+ 0.82	1.82	0.0	5	24	3	3	s.	G. W. Derrick.
Guymon	Texas		1								1.53		0.87	0.0	3	17	2	11	se.	A. L. Mordt.
Harrington	Roger Mills		8	72.3		98	2	44	27	40	2.12		0.95	0.0	4	27	3	0	s.	J. G. Harrington.
Hartshorne	Pittsburg	700	11	74.8	+ 0.1	105	11†	35	28	48	0.92	− 2.46	0.50	0.0	3	17	11	1	s.	Edward Glendenning.
Healdton	Carter	900	16	74.2		103	10†	31	28	59	0.05	− 2.81	0.05	0.0	1	26	4	0	s.	A. C. Heald.

TABLE 1.—*Climatological data for September, 1909. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oklahoma—Cont'd.																				
Hennessey	Kingfisher	1,166	15	75.6	+ 1.5	106	10	41	28	51	0.82	− 2.18	0.68	0.0	2	19	11	0	s.	W. W. Parks.
Hobart	Kiowa	1,396	6	75.2	.....	102	1	41	23	37	0.81	.....	0.46	0.0	2	23	6	1	s.	Roy Benedict.
Holdenville	Hughes	900	9	74.6	+ 0.8	103	11	38	28	51	1.11	− 3.38	0.60	0.0	3	25	5	0	s.	Miss M. Rutherford.
Hooker	Texas	2,999	4	68.9	.....	100	2	38	28	45	1.56	.....	0.71	0.0	3	18	2	10	s.	J. N. Kelly.
Hurley	Cimarron	.....	1	65.5	.....	98	2	38	22†	41	1.40	.....	1.20	0.0	2	19	4	7	sw.	C. W. Myers.
Idabel	McCurtain	474	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. W. B. McCaskill.
Jefferson[b]	Grant	1,062	16	72.5	− 0.8	96	3†	33	28	47	1.45	− 1.16	0.50	0.0	4	26	3	1	s.	J. M. Maddy.
Kenton	Cimarron	4,000	10	67.7	− 0.5	99	2	36	23	44	1.26	− 0.60	0.52	0.0	4	22	3	5	s.	L. A. Wikoff.
Kingfisher	Kingfisher	1,046	12	75.5	+ 1.5	104	10	33	28	52	1.61	− 1.84	0.92	0.0	2	20	10	0	s.	J. C. Cross.
McAlester	Pittsburg	698	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. Noble.
McComb	Pottawatomie	1,200	15	75.8	+ 2.3	102	11	37	28	48	0.26	− 2.71	0.26	0.0	1	21	9	0	s.	Jas. E. McNair.
Mangum	Greer	1,585	17	73.7	− 0.7	101	10†	40	28†	49	0.80	− 1.62	0.73	0.0	2	28	0	2	s.	Wade N. Johnson.
Marlow	Stephens	1,292	9	76.5	+ 2.7	102	11	45	28	41	0.14	− 3.40	0.14	0.0	1	27	0	3	ne.	W. B. Anthony.
Meeker	Lincoln	1,030	16	74.6	+ 0.2	104	11	32	28	52	0.56	− 1.94	0.55	0.0	2	28	0	2	s.	Dr. John H. Baugh.
Muskogee	Muscogee	614	11	77.1	+ 3.4	107	11	41	27	43	0.71	− 2.33	0.42	0.0	2	19	11	0	se.	Prof. E. N. Collette.
Mutual	Woodward	.....	3	74.2	.....	106	4†	36	28	51	0.95	.....	0.95	0.0	1	28	0	2	s.	Thos. Martin.
Neola	Caddo	1,500	4	75.2	.....	102	10†	41	28	43	1.93	.....	1.91	0.0	2	27	2	1	se.	R. M. Schooling.
Newkirk	Kay	1,149	13	75.2	+ 2.1	101	3†	42	26†	42	2.32	− 0.88	1.92	0.0	2	20	10	0	s.	P. H. Allright & Co.
Norman	Cleveland	1,171	16	75.0	+ 0.4	101	10†	36	28	50	0.81	− 1.80	0.23	0.0	6	15	15	0	s.	Walter H. Meier.
Okeene	Blaine	1,194	6	75.1	.....	106	10	38	28	45	0.83	.....	0.61	0.0	3	23	6	1	s.	Dr. L. H. Murdock.
Oklahoma	Oklahoma	1,247	20	74.9	+ 2.8	100	11	43	27	37	0.53	− 2.22	0.46	0.0	4	20	5	5	s.	U. S. Weather Bureau.
Okmulgee	Okmulgee	752	7	76.4	.....	105	11	33	28†	54	0.04	.....	0.04	0.0	1	24	4	2	s.	J. L. Maynard.
Pauls Valley	Garvin	880	10	73.8	+ 0.4	104	10	33	28	55	0.52	− 3.20	0.47	0.0	2	27	3	0	s.	A. M. Foss.
Pawhuska	Osage	918	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. C. Block.
Perry	Noble	1,060	12	76.1[b]	+ 2.9	102[a]	4	39[b]	27	43	1.19	− 1.56	0.70	0.0	4	21	9	0	n.	J. A. Douglas.
Ravia	Johnson	796	8	77.0	.....	105	10	39	28†	52	0.30	.....	0.15	0.0	3	24	6	0	s.	R. G. Guptill.
Sac and Fox Agency	Canadian	900	17	77.1	+ 3.6	103	11	39	28	42	0.43	− 2.15	0.23	0.0	3	25	2	3	sw.	D. J. Henderson.
Shawnee	Pottawatomie	1,041	9	75.2	+ 1.8	102	11	36	28	47	0.62	.....	0.43	0.0	3	26	1	3	s.	Neal R. Clark.
Snyder	Kiowa	1,356	3	76.2	.....	101	10†	40	28	43	0.48	.....	0.48	0.0	1	25	5	0	s.	Dr. W. G. Woodard.
Stillwater	Payne	880	17	73.6	+ 0.7	101	11	36	28	49	1.54	− 1.80	1.21	0.0	3	22	4	4	s.	John M. Speidel.
Supply	Woodward	.....	2	72.7	.....	103	2	36	27†	49	3.32	.....	1.23	0.0	6	17	11	2	s.	A. H. Trimbo.
Temple	Comanche	925	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. F. Fitch.
Tulsa (1)	Tulsa	700	21	75.5	+ 0.1	103	10†	39	28	50	0.25	− 2.10	0.14	0.0	4	21	2	7	n.	William Hall.
Tulsa (2)	...do	702	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Pearl E. Towers.
Vinita	Craig	698	6	75.5	.....	105	10†	34	28	50	1.10	.....	1.00	0.0	3	20	4	6	s.	Lyman Bros.
Wagoner	Wagoner	588	13	78.2	+ 4.0	104	3†	37	28	46	0.02	− 3.46	0.02	0.0	1	17	0	7	s.	S. L. Hatfield.
Waukomis	Garfield	1,258	13	74.3	+ 0.4	103	11	40	27†	50	0.89	− 2.15	0.52	0.0	3	24	4	2	se.	R. C. Shades.
Weatherford	Custer	1,639	8	75.4	.....	102	10	39	28	46	3.08	.....	2.19	0.0	4	25	3	2	s.	M. D. Reed.
Webbers Falls	Muskogee	479	11	74.6	− 0.2	105	11	34	28	51	2.00	− 1.49	0.70	0.0	7	13	17	0	e.	B. D. Boulineau.
Whiteagle	Kay	945	4	75.4	.....	100	4†	37	28	46	0.26	.....	0.15	0.0	3	24	6	0	se.	J. M. Dankwardt.
Woodward	Woodward	.....	1	73.2	.....	102	2	34	28	51	4.88	.....	3.95	0.0	4	27	2	1	s.	R. A. Boyle.
Missouri.																				
Belle[a]	Maries	.....	17	67.6	− 2.5	97	3	33	28	39	3.74	− 0.08	1.48	0.0	6	4	17	9	ne.	A. J. Wofford.
Birchtree	Shannon	1,200	15	70.2	+ 0.8	95	9	36	28	38	3.68	+ 0.58	1.15	0.0	9	21	4	5	ne.	V. H. Kirkendall.
Cape Girardeau	Cape Girardeau	346	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. L. Albert.
Caruthersville	Pemiscot	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. E. Averill.
Dean	McDonald	.....	10	72.5	+ 1.6	105	11	32	28	51	1.66	− 1.65	1.51	0.0	4	24	1	5	.....	H.E. Dean.
Doniphan	Ripley	440	5	69.2	.....	95	9	36	28	38	4.76	.....	2.00	0.0	6	17	6	7	ne.	W. W. Martin.
Farmington[f]	St. Francois	889	2	67.6	.....	96	12	35	28	39	6.01	.....	3.25	0.0	5	17	0	5	.....	Miss Helen Montgomery.
Gano	Dent	.....	5	69.6	.....	100	3	35	28	39	3.57	.....	1.09	0.0	7	20	6	4	se.	A. C. Leech.
Goodland	Iron	900	4	66.0	.....	96	3	32	28	39	4.60	.....	1.96	0.0	7	20	1	9	s.	F. M. Adams.
Greenville	Wayne	.....	14	71.0	+ 0.7	100	9	36	28	48	5.16	+ 2.31	1.91	0.0	6	16	12	2	n.	A. G. Templeton.
Ironton	Iron	925	31	67.6	+ 0.2	97	3	31	28	41	6.57	+ 3.18	2.20	0.0	8	14	12	4	n.	W. H. Delano.
Jackson	Cape Girardeau	458	18	70.5	+ 1.3	95	3	38	28	40	8.36	+ 4.96	2.60	0.0	7	15	10	5	n.	L. M. Bean.
Joplin[m]	Jasper	979	30	68.2	.....	90	14	39	26	42	1.90	.....	1.40	0.0	2	13	0	4	ne.	Miss Elizabeth Russum.
Koshkonong	Oregon	911	9	70.9	.....	102	3	41	27	36	3.24	.....	1.14	0.0	9	19	8	3	ne.	J. W. Hitt.
Lamar	Barton	964	28	73.6	+ 3.4	104	11	35	28	47	1.09	− 3.08	1.00	0.0	2	20	6	4	sw.	E. H. Adams.
Marble Hill	Bollinger	420	16	69.2	− 1.4	96	9	36	28	37	5.75	+ 2.14	2.00	0.0	6	16	13	1	s.	A. F. Hendricks.
Marshfield	Webster	1,492	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. P. Keeler.
Mt. Vernon	Lawrence	1,480	33	71.6	+ 0.3	100	11	34	28	41	3.30	− 0.22	2.25	0.0	6	15	14	1	se.	Dr. O. H. Brown.
Neosho	Newton	1,023	25	71.6	+ 1.4	102	11	32	27†	46	2.16	− 2.06	1.93	0.0	4	21	5	4	sw.	H. D. Dean.
Oakfield	Franklin	793	17	68.4	− 2.2	97	3	40	27	32	6.82	+ 3.40	3.11	0.0	8	12	11	7	s.	E. E. Steiner.
Olden	Howell	1,246	19	69.2	− 0.4	97	10	38	28	40	3.44	− 0.43	1.52	0.0	6	18	8	4	e.	J. D. Evans.
Perryville	Perry	582	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. L. Cayton.
Poplar Bluff	Butler	343	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. C. Thomes.
Sikeston	Scott	328	14	70.7	− 0.5	93	3†	39	28	35	6.57	+ 3.59	2.30	0.0	7	23	4	3	se.	A. A. Harrison.
Springfield	Greene	1,350	22	70.6	+ 2.7	96	3	42	27	32	0.69	− 3.07	0.29	0.0	9	22	3	5	se.	U. S. Weather Bureau.
Steelville	Crawford	1,746	12	71.4	.....	99	3	31	28	42	3.55	+ 0.59	0.65	0.0	5	13	8	7	n.	Edwin Pumphrey.
Willow Springs	Howell	1,300	16	70.4	+ 1.9	98	3	34	28	46	2.50	− 1.51	1.19	0.0	4	18	2	10	ne.	John Lovewell.
Kentucky.																				
Blandville	Ballard	445	29	68.5	− 3.2	88	12	43	27†	25	5.79	+ 2.67	1.93	0.0	7	15	9	6	ne.	E. W. Horr.
Lynnville	Graves	.....	8	69.8	.....	93	9	40	28	33	5.65	.....	1.40	0.0	6	19	5	6	sw.	Wm. Scherffius.
Tennessee.																				
Arlington	Shelby	.....	28	70.6	− 0.9	96	3	38	28	44	2.57	+ 0.11	1.45	0.0	5	15	7	8	n.	A. T. B. Etheridge.
Bolivar	Hardeman	450	25	71.0	− 0.2	98	3	39	28	40	3.10	+ 0.03	1.33	0.0	5	16	2	12	n.	Miss M. A. Smith.
Brownsville	Haywood	361	27	70.0	− 1.7	96	3	40	28	34	4.68	+ 2.00	1.46	0.0	8	15	10	5	s.	Miss Hattie N. Moss.
Covington	Tipton	311	27	71.2	− 0.8	96	10	40	28	43	3.80	+ 1.11	1.25	0.0	6	21	0	9	n.	J. S. Ruffin.
Dyersburg	Dyer	310	27	71.3	− 0.5	97	3	41	28	36	3.74	+ 0.68	1.30	0.0	5	19	0	11	ne.	M. A. Sinclair.
Jackson	Madison	450	16	73.3	+ 0.7	97	3†	38	28	42	4.79	+ 2.21	1.24	0.0	6	13	9	8	n.	T. H. Hartmus.
Kenton[b]	Obion	.....	8	72.0	− 0.1	95	9	39	28	35	5.90	+ 3.00	1.73	0.0	8	19	4	7	n.	G. S. Martin.
Memphis	Shelby	409	39	73.2	+ 0.4	94	3	47	28	25	4.09	+ 1.04	2.37	0.0	7	16	6	8	ne.	U. S. Weather Bureau.
Milan	Gibson	440	27	69.3	− 2.5	95	3	40	28	38	4.55	+ 1.48	1.54	0.0	8	13	5	12	n.	O. F. Cantwell.
Trenton[a]	...do	345	28	70.2	− 1.2	97	3	36	28	41	5.46	+ 2.43	1.94	0.0	7	21	4	5	ne.	Prof. F. L. Dennison.
Union City	Obion	360	14	72.0	− 0.5	96	4	39	28	40	4.88	+ 1.71	1.82	0.0	4	21	8	1	.....	Earl A. Kinzey.
Arkansas.																				
Alicia	Lawrence	.....	5	72.7	.....	100	3	37	28	39	3.50	.....	2.00	0.0	3	22	8	0	sw.	McCullough & Guelck.
Amity	Clark	250	17	76.1	+ 3.0	105	11	32	28	53	0.99	− 1.79	0.93	0.0	2	22	5	3	ne.	Prof. S. M. Samson.
Arkadelphia (near)	...do	250	2	76.8	.....	102	8†	39	28	42	1.19	− 2.85	0.83	0.0	3	21	7	2	n.	J. A. Ross.
Arkansas City	Desha	145	26	.....	.....	.....	.....	.....	.....	.....	5.36	+ 2.90	3.10	0.0	0	.....	.....	.....	.....	W. C. Blundell.
Batesville (1)	Independence	271	10	.....	.....	.....	.....	.....	.....	.....	3.48	.....	1.18	0.0	7	.....	.....	.....	.....	John Q. Wolf.
Batesville (2)	...do	271	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Lelia I. Feter
Bee Branch	Van Buren	.....	17	75.6	+ 1.8	106	3	40	28	44	3.55	+ 0.51	1.10	0.0	5	19	6	5	.....	J. E. Scanlan.
Benton	Saline	283	2	74.0[i]	.....	96	12[k]	44[e]	28	37[r]	2.73	.....	1.66	0.0	4	19	7	4	nw.	J. E. Evans.
Bentonville	Benton	1,303	4	72.6	+ 3.7	101	11	37	28	40	1.39	− 2.08	0.84	0.0	5	21	5	4	sw.	U. S. Weather Bureau.
Bergman	Boone	1,324	13	69.6	− 0.8	101	3	31	28	48	0.87	− 2.69	0.70	0.0	3	18	10	2	nw.	John T. Maxey.
Black Rock	Lawrence	.....	5	.....	.....	.....	.....	.....	.....	.....	4.44	.....	2.07	0.0	6	.....	.....	.....	.....	S. J. Howe.
Brinkley	Monroe	226	23	74.1	+ 0.9	103	3†	39	28†	49	3.20	+ 0.61	1.65	0.0	5	14	5	11	s.	H. L. D. Whitson.

TABLE 1.—*Climatological data for September, 1909. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Arkansas—Cont'd.																				
Calico Rock	Izard	361	5								3.14		1.30	0.0	4					W. H. Stoner.
Camden	Ouachita	158	24	76.2	+ 1.8	104	10	39	28	45	3.30	− 0.05	2.20	0.0	6	27	0	3	ne.	R. H. Quarterman.
Centerpoint	Howard		9	77.8		104	10†	39	28	47	4.50			0.0	1	20	6	4	ne.	J. M. Huddleston.
Clarendon	Monroe	171	5								4.34		1.78	0.0	8					Mrs. B. E. Bishop.
Conway	Faulkner	309	26	75.4	+ 2.1	104	10	39	28	43	2.59	− 0.97	1.64	0.0	6	14	15	1	se.	G. H. Burr.
Corning	Clay	293	17	72.2	+ 1.3	99	3	36	28	36	3.36	− 0.33	1.92	0.0	8	14	9	7	n.	Jacob Brobst.
Dardanelle	Yell	330	23	75.8		104	3†	38	28	57	1.46	− 1.61	0.72	0.0	4	19	6	5	0	A. Bernard.
Dodd City	Marion	1,175	28	71.8	+ 0.2	102	3	34	28	45	1.81	− 1.95	1.25	0.0	4	13	9	8	s.	Neal Dodd.
Dutton	Madison		8								0.45		0.37	0.0	2					T. S. Williamson.
Earl	Crittenden		3	73.5		99	3	38	27	40	6.72		2.32	0.0	5	20	6	4		W. J. Moss.
Eldorado	Union	265	5	76.0		103	10	41	28	39	4.21		3.05	0.0	4	24	3	3	n.	Fred A. Babb.
England	Lonoke		3	74.7		101	9	39	28†	47	3.50		1.95	0.0	6	10	14	6	n.	J. C. Chenault.
Eureka Springs	Carroll		8																	Jas. T. Pomeroy.
Fayetteville	Washington	1,451	20	75.7	+ 4.5	102	11	35	28	45	0.59	− 2.99	0.35	0.0	4	19	8	3	sw.	University of Arkansas.
Fort Smith	Sebastian	481	27	76.4	+ 3.7	104	11	42	28	42	0.38	− 2.79	0.31	0.0	5	18	5	7	e.	U. S. Weather Bureau.
Fulton	Hempstead	264	5								1.04		0.74	0.0	2					B. C. Logan.
Hardy	Sharp	643	11	71.9	− 0.3	105	3	40	28	38	4.51	+ 0.70	1.66	0.0	8	11	13	6	se.	C. A. Caywood.
Helena (1)	Phillipi	182	24	74.8	+ 0.6	99	10	43	28	36	3.28	− 0.36	2.86	0.0	5	21	2	7	n.	Robert Kyle.
Helena (2)	...do	182	8																	B. F. Modisett.
Hot Springs	Garland	600	3			101	3†				4.23	+ 0.64	1.43	0.0	4	20	9	1	sw.	Hot Springs Water Co.
Huttig	Union	85	2	76.4		101	8†	41	29	40	3.65		2.35	0.0	5	18	12	0		C. A. Berry.
Jonesboro	Craighead	345	14	72.9	− 1.3	103	3	39	28	40	5.79	+ 2.03	3.04	0.0	4	14	15	1	s.	Benedictine Sisters.
Junction	Union		16																	J. A. Lowderback.
Lacrosse	Izard		15																	R. E. Kennard.
Lake Farm	Jefferson	195	2	74.2		102	1†	38	28†	42	3.67		2.02	0.0	4	19	7	4	s.	R. H. Gillespie.
Lewisville	Lafayette	262	6	78.0		106	10	39	28	45	1.51		0.54	0.0	5	23	1	6		F. W. Youmans.
Little Rock	Pulaski	357	30	74.8	+ 1.7	98	3	46	28	31	3.17	− 0.09	1.99	0.0	6	14	12	4	ne.	U. S. Weather Bureau.
Lutherville	Johnson	775	12	74.8	+ 1.6	105	10	35	28	44	0.67		0.59	0.0	2	19	9	2	sw.	Herman Hentschel.
McNeil	Columbia	321	2																	L. A. Smith.
Malvern	Hot Spring	277	22	74.6	+ 0.5	104	10	39	28†	44	2.53	− 0.07	1.19	0.0	6	14	3	13	ne.	Miss L. C. Smith.
Mammoth Spring	Fulton		5	70.2[a]		103[a]	3	34[a]	28	46[a]	4.54		1.35	0.0	8					F. Wallick.
Marked Tree	Poinsett		5								3.89		2.59	0.0	4					L. Smith.
Mena	Polk	1,100	23	75.2	+ 2.1	97	8	38	28	38	0.86	− 2.96	0.37	0.0	4	21	7	2	sw.	D. H. Hopkins.
Mossville	Newton		16	71.9	+ 1.9	98	11	42	27	34	1.76	− 2.64	0.80	0.0	3	18	8	4	s.	Theo. Ober.
Mount Nebo	Yell	1,750	19																	T. G. Church.
Newport (1)	Jackson	231	25	72.9	− 0.4	99	3	41	28	38	8.05	+ 4.39	4.27	0.0	7	22	0	8	s.	Mrs. A. B. Hillhouse.
Newport (2)	...do	231																		A. V. Hughes
Ozark	Franklin	377	18	78.8[b]	+ 2.5	108[d]	3	43	28	44[d]	0.50	− 2.52	0.28	0.0	2	25	4	1	e.	R. M. Adams.
Pine Bluff	Jefferson	215	21	75.7	0.0	104	9	40	29	42	3.50	− 0.24	2.50	0.0	5	21	3	6	w.	J. H. Hudson.
Pocahontas	Randolph		17	73.0	+ 1.2	104	3	40	28	34	4.26	+ 0.96	1.90	0.0	6	8	19	3		Benedictine Sisters.
Pond	Benton	1,250	12	72.7	+ 2.6	103	11	33	27†	49	1.22	− 2.59	0.95	0.0	4	15	12	3	sw.	A. F. Stevens.
Portland	Ashley	122	....	77.4	+ 1.8	105	8†	42	29	50	3.20		2.10	0.0	6	21	4	5	n.	T. A. Corson.
Prescott	Nevada	327	21	77.2	+ 1.6	106	10	40	29	46	1.54	− 1.09	1.05	0.0	4	24	2	4	ne.	A. M. Ellsworth.
Princeton	Dallas	287	8																	Capt. D. R. Feaster.
Rogers	Benton	1,385	18	73.6	+ 3.2	102	11	34	28	43	0.39	− 3.11	0.36	0.0	3	17	8	5	n.	Carl A. Stark.
Russellville	Pope	348	24																	J. F. Hodgins.
Spielerville	Logan	1,050	12	77.1	+ 2.3	104	3†	40	28	46	1.67	− 1.50	1.39	0.0	3	22	3	5	se.	New Subiaco Abbey.
Springbank	Miller	182	2								1.75		0.88	0.0	4					G. Field.
Stuttgart	Arkansas	495	22	74.8	+ 1.7	105	10	39	28	40	5.12	+ 1.83	2.37	0.0	6	19	8	3	n.	H. A. Buerkle.
Texarkana	Miller	332	25	77.8	+ 1.4	108	10	42	28	42	0.81	− 2.10	0.42	0.0	4	26	2	2	s.	W. B. Weeks.
Warren	Bradley	304	14	75.2	− 0.4	104	10	41	29	40	2.90	− 0.54	2.43	0.0	3	15	7	8	n.	W. J. Savage.
Whitecliffs	Little River	206	5								0.48		0.40	0.0	3					John E. Payton.
Wiggs	Garland		16	75.2	+ 1.3	103	10	33	28	51	2.82	− 0.87	0.94	0.0	5	10	17	3	sw.	S. D. Jester.
Wynne	Cross		1	72.9		103	3	38	28	39	4.71		1.54	0.0	7	18	1	11	n.	R. R. Poole.
Mississippi.																				
Anguilla	Sharkey		1	75.8		101	10	41	29	35	4.62		3.75	0.0	2	19	8	3	ne.	E. W. Cook.
Austin	Tunica	200	13	73.4	− 0.3	98	10	41	28†	38	3.97	+ 0.50	2.87	0.0	3	22	6	2	n.	H. J. Irvine.
Batesville	Panola	230	22	74.9	+ 1.7	102	10	39	29	46	3.16	+ 0.07	2.10	0.0	5	25	0	5	e.	J. M. Cox.
Byhalia	Marshall	390									4.92		1.87	0.0	5	9	18	3	nw.	Tallahatchie Dng. Com.
Canton	Madison	228	19	76.5	+ 0.8	99	8	43	28†	38	2.44	− 0.53	2.23	0.0	4	16	12	2	se.	Dr. G. W. Smith-Vaniz.
Clarksdale	Coahoma	177	2	74.7		101	9†	40	29	45	2.51		2.00	0.0	3	20	5	5	se.	J. F. Durham.
Coffeeville	Yalobusha										2.43		2.05	0.0	5	18	11	1	n.	Tallahatchie Dng. Com.
Corinth	Alcorn	430	21	72.4	0.0	96	3	41	29	33	7.95	+ 5.14	5.25	0.0	7	20	2	8	se.	Milton A. Chandler.
Crenshaw	Panola	187	....								2.83		1.86	0.0	3	16	8	6	ne.	Tallahatchie Dng. Com.
Denmark	Lafayette		....								6.38		3.03	0.0	9					Do.
Duck Hill[j]	Montgomery		10					39	28	41				0.0					s.	W. H. Eskridge.
Edwards	Hinds	222	22	76.2	− 0.7	98	1†	42	28†	39	5.21	+ 1.99	3.95	0.0	6	17	12	1	n.	C. R. Knox.
Enid	Tallahatchie										2.81		2.30	0.0	5	24	5	1	e.	Tallahatchie Dng. Com.
Fayette	Jefferson	282	8	76.1		99	10	39	28	39	8.41		5.06	0.0	3	22	7	1	sw.	T. L. Darden.
Greenville	Washington	126	22	76.6	+ 0.9	102	10	45	29	39	4.35	+ 1.30	3.56	0.0	5	25	0	5	se.	F. L. Harbison.
Greenwood	Le Flore	140	9	75.8	+ 0.7	101	9†	41	29	42	3.48		2.92	0.0	5	19	7	4	se.	J. H. Stephen.
Grenada	Grenada										3.78		3.07	0.0	4	20	9	1	w.	Tallahatchie Dng. Com.
Hernando	De Soto	391	21	74.0	− 0.1	99	9†	43	28	34	5.09	+ 1.94	2.40	0.0	5	23	0	7	se.	Miss Josephine G. Jones.
Hickory Flat	Benton	435									3.26		1.55	0.0	7	13	14	3	ne.	Tallahatchie Dng. Com.
Holly Springs	Marshall	600	22	72.2	− 1.5	95	3	42	28	30	3.40	+ 0.03	1.22	0.0	5	18	5	7	ne.	L. B. Mosby.
Kosciusko	Attala	430	19	74.5	− 0.5	97	9	41	29†	41	3.05	− 0.04	1.34	0.0	8	22	5	3	n.	E. L. Lucas.
Lake Cormorant	De Soto	206	....								3.58		2.26	0.0	4	12	11	7	ne.	Tallahatchie Dng. Com.
Lula	Coahoma	182	....								2.77		2.40	0.0	3	23	3	4	ne.	Do.
Malone	Marshall		....								2.86		1.90	0.0	4				e.	Do.
Marks	Quitman	163	....								3.25		2.58	0.0	4					Do.
Natchez	Adams	206	21	77.8	+ 0.4	100	5†	45	28	35	7.40	+ 3.96	5.34	0.0	6	18	8	4	n.	J. C. Weir.
New Albany	Union	398									2.91		1.16	0.0	7	15	12	3	n.	Tallahatchie Dng. Com.
Pontotoc	Pontotoc	475	20	74.9[e]	+ 1.2	96[e]	4				3.55	+ 0.48	2.00	0.0	6	12	18	0	sw.	Dr. C. W. Bolton.
Port Gibson	Claiborne	116	21	75.7	− 0.1	100	2†	40	28†	41	4.05	+ 0.92	3.05	0.0	4	24	1	5	e.	H. H. Crisler.
Ripley	Tippah		10	73.7[b]	+ 1.1	95	3				2.70	− 1.60	1.60	0.0	2	25	3	2	n.	S. W. Pegram.
Rosedale	Bolivar	143	1	75.8[b]		103[e]	9	42[a]	29†	40[c]	2.52		1.90	0.0	4	19	6	5	ne.	W. A. Shelby.
Senatobia	Tate										4.85		2.31	0.0	6	27	0	3	ne.	Tallahatchie Dng. Com.
Shoccoe	Madison		6	74.9		97	7†	40	28	39	2.34		1.78	0.0	3	20	7	3	w.	J. C. Pitchford.
Suffolk	Franklin		8	77.2		100	1	43	28	37	3.29		1.50	0.0	7	13	13	4	w.	Prof. Geo. H. Kent.
Swan Lake	Tallahatchie	148	8								2.30		2.30	0.0	2					B. F. Saunders.
Tuchula	Holmes	130	4	75.8		100	9	39	28†	40	6.35		2.90	0.0	5	12	15	3	w.	Dr. M. P. Winkler.
University	La Fayette	502	17																	Prof. J. W. Johnson.
Utica	Hinds	287	5	76.4		98	10	42	29	39	5.52		3.94	0.0	9	16	7	7	n.	Dr. J. B. Dudley.
Vicksburg	Warren	247	38	76.0	+ 1.2	95	7	46	28	26	4.96	+ 1.62	3.71	0.0	7	19	9	2	n.	U. S. Weather Bureau.
Water Valley	Yalobusha	300	20	74.7	0.0	101	10	41	29	43	3.99	+ 0.56	2.20	0.0	5	20	7	3	ne.	Miss Lula Erikson.
Woodville	Wilkinson	560	16	76.6	− 0.6	98	10	44	28	33	7.69	+ 4.16	4.10	0.0	9	21	7	2	se.	James E. Lee.
Yazoo City	Yazoo	116	15	76.2	− 0.3	99	8†	42	28	37	3.74	+ 1.03	3.04	0.0	3	22	4	4	se.	H. S. Orr.

TABLE 1.—*Climatological data for September, 1909. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Louisiana.																				
Abbeville	Vermilion	18	22	75.6ª	− 2.9	97	5	44	28†	40	8.53	+ 4.35	5.92	0.0	8	21	7	2	n.	Hon. C. J. Edwards.
Alexandria	Rapides	77	21	77.1	− 0.2	99	10†	41	29	44	3.35	+ 0.50	2.20	0.0	5	19	6	5	n.	Miss Nellie Graham.
Amite	Tangipahoa	130	21	77.2	− 0.1	97	12	46	28†	36	4.35	− 0.20	2.13	0.0	8	7	23	0	n.	Miss Lula M. Wentz.
Baton Rouge	E. Baton Rouge	35	20	77.0	− 0.9	99	6†	43	28	30	6.16	+ 2.54	5.15	0.0	5	26	1	3	ne.	Elmo M. Bott.
Burnside‖	Ascension	20	9	77.6ᵇ	.....	93	1†	46ᵇ	28	38ᵇ	6.33	.....	5.60	0.0	4	16	10	4	e.	C. S. McFarland.
Burrwood	Plaquemines	1	19	80.6ª	+ 0.4	90ª	7	64ª	28	12ª	4.87	− 1.81	2.30	0.0	7	.....	.....	.....	n.	Graham Myers.
Calhoun	Ouachita	180	17	76.6	+ 1.5	104	10	40	29	42	3.13	− 0.85	2.10	0.0	4	15	14	1	s.	N. L. Exp. Station.
Cameron	Cameron	6	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	State Biologic Station.
Cheneyville	Rapides	67	22	77.0	0.0	98	8†	40	28†	45	3.76	+ 0.69	3.20	0.0	3	23	2	5	n.	Walter I. Tanner.
Clinton	East Feliciana	113	20	76.0	− 0.7	96	10	46	29	33	8.27	+ 4.51	5.90	0.0	6	18	7	5	n.	John A. White, jr.
Collinston	Morehouse	65	7	76.8ᵇ	.....	102ᵇ	10	41ᵇ	28	51ᵇ	2.50	.....	2.00	0.0	4	18	7	5	.....	W. A. Page.
Covington	St. Tammany	39	17	78.0	+ 0.3	96	6†	47	29†	39	5.94	+ 1.55	3.35	0.0	9	14	10	6	se.	C. Champagne.
Dodson	Winn	.....	1	77.6	.....	101	8†	43	29	38	2.92	.....	1.62	0.0	3	20	9	1	n.	J. P. Lucas.
Donaldsonville	Ascension	33	19	78.7	− 0.1	96	1†	48	28	36	5.00	+ 0.68	4.60	0.0	3	28	0	2	n.	John F. Park.
Farmerville	Union	177	19	76.4ª	+ 0.6	100ª	8†	42ᵇ	29	39ᵇ	4.41	+ 1.83	3.05	0.0	2	18	6	1	n.	W. P. Chandler.
Ferriday	Concordia	.....	3	75.2	.....	100	10	40	29	40	4.33	.....	3.35	0.0	2	25	0	5	n.	R. Z. Slater.
Franklin	St. Mary	10	17	79.4	+ 0.5	98	2†	48	29	35	7.46	+ 4.39	5.40	0.0	9	23	3	4	n.	Miss Josephine M. Bonney
Grand Cane	De Soto	302	3	77.2	.....	103	10	40	29†	49	2.67	.....	1.09	0.0	3	19	0	11	s.	J. J. Paxton.
Grand Coteau	St. Landry	93	17	77.8	+ 0.4	97	1	45	28	36	5.14	+ 1.70	3.80	0.0	6	20	9	1	n.	St. Charles College.
Hammond	Tangipahoa	44	10	77.6	+ 0.5	97	6	45	29	38	7.59	+ 4.73	3.20	0.0	6	24	5	1	se.	C. C. Carr.
Houma	Terrebonne	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. M. Haggerty.
Jennings	Calcasieu	30	11	78.0	+ 0.1	97	6	43	28†	42	2.94	− 2.00	1.65	0.0	6	12	17	1	n.	J. F. Buch.
Lafayette	Lafayette	36	22	77.0	− 0.7	95	1†	44	28	37	5.43	+ 1.93	5.09	0.0	7	23	3	4	n.	J. J. Davidson.
Lake Charles	Calcasieu	22	21	77.2	− 0.4	100	1†	45	28†	41	4.23	+ 0.54	2.57	0.0	4	27	1	2	n.	A. O. Boudreaux.
Lakeside	Cameron	.....	8	79.0	.....	98	8	43	28	31	2.97	.....	1.55	0.0	5	.....	.....	.....	ne.	L. J. Nunemacher.
Lawrence	Plaquemines	6	19	78.2ª	− 1.2	96ª	4†	53ª	28	29ª	5.22	− 1.28	2.20	0.0	7	21	1	8	n.	H. C. Warmoth.
Liberty Hill	Bienville	.....	22	81.4	+ 4.6	105	10	45	28	35	3.70	+ 0.65	3.27	0.0	4	19	10	1	n.	Dr. E. A. Crawford.
Logansport	De Soto	192	4	.....	.....	.....	.....	.....	.....	.....	2.10	.....	1.30	0.0	3	22	4	4	n.	Mrs. Bettie M. Dennis.
Melville	St. Landry	45	22	77.2	− 0.5	98	1†	44	28†	40	7.54	+ 4.44	6.90	0.0	3	26	0	4	n.	Chas. B. McNeill.
Minden	Webster	194	21	76.4	− 0.6	104	9†	38	29	49	2.10	− 0.23	1.22	0.0	6	17	9	4	n.	Miss Ethel Fort.
Monroe	Ouachita	82	22	75.6	− 1.3	98	1†	45	28	38	2.54	− 0.36	1.98	0.0	4	27	0	3	s.	Eugene Stannard.
Morgan City	St. Mary	14	4	.....	.....	.....	.....	.....	.....	.....	4.42	.....	2.08	0.0	8	25	1	4	n.	Virgil E. Kinsey.
Newellton	Tensas	.....	2	74.7	.....	94	2†	41	28	35	3.00	.....	2.75	0.0	3	11	10	2	n.	John D. Fultz.
New Iberia	Iberia	15	19	77.8	+ 0.2	93	3†	46	28	27	10.60	+ 6.54	6.50	0.0	10	18	15	4	ne.	Mrs. Jno. A. Gebert.
New Orleans (1)	Orleans	15	35	79.4	+ 1.4	93	4	56	28	17	7.68	+ 2.87	4.45	0.0	9	14	14	2	n.	U. S. Weather Bureau.
New Orleans (2)	....do	18	22	.....	.....	92	2†	.....	.....	.....	6.54	+ 0.52	4.65	0.0	8	16	5	9	s.	Sugar Exp. Station.
New Orleans (3)	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.39	.....	4.33	0.0	8	.....	.....	.....	.....	Sewerage and Water Board, New Orleans Drainage Commission.
New Orleans (4)	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.41	.....	4.60	0.0	11	.....	.....	.....	.....	
New Orleans (5)	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	7.08	.....	4.34	0.0	10	.....	.....	.....	.....	
New Orleans (6)	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	7.08	.....	4.38	0.0	10	.....	.....	.....	.....	
New Orleans (7)	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.59	.....	4.38	0.0	7	.....	.....	.....	.....	
New Orleans (8)	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.61	.....	3.54	0.0	10	.....	.....	.....	.....	
Opelousas	St. Landry	83	18	78.1	+ 0.3	100	7†	42	28	39	6.15	+ 2.52	5.54	0.0	4	20	2	8	n.	Andrew Moresi.
Pearl River	St. Tammany	.....	3	.....	.....	.....	.....	.....	.....	.....	7.38	.....	4.40	0.0	12	23	5	2	e.	George F. Bancks.
Plain Dealing	Bossier	268	17	77.8	+ 1.4	104	10	39	28†	46	1.62	− 1.37	0.49	0.0	5	13	14	3	ne.	Leon Sanders.
Rayne	Acadia	44	18	78.2	0.0	99	10	47	30	38	3.75	− 0.47	2.90	0.0	3	25	2	3	n.	A. P. McNeil.
Reserve	St. John Baptist	.....	8	.....	.....	96	6	.....	.....	.....	5.74	.....	3.93	0.0	4	7	19	4	.....	Leon Godchaux Co.
Robeline	Natchitoches	147	14	76.4	− 0.9	103	9	36	28	48	2.03	− 0.94	1.99	0.0	2	25	1	4	s.	Miss Ruby McCook.
Ruston	Lincoln	312	13	77.6	− 0.8	104	10	42	27	40	2.00	− 1.26	2.00	0.0	2	24	5	1	n.	J. C. H. McKinney.
Schriever	Terrebonne	17	18	79.7	+ 1.5	100	6	47	28†	38	9.74	+ 5.00	6.93	0.0	9	26	1	3	e.	Charles V. Moore.
Shreveport	Caddo	249	37	77.1	+ 1.4	99	10	44	28	32	1.46	− 1.76	0.76	0.0	6	19	8	3	ne.	U. S. Weather Bureau.
Simmesport	Avoyelles	.....	4	.....	.....	.....	.....	.....	.....	.....	4.25	.....	3.68	0.0	6	13	11	6	ne.	W. P. Denny.
Southern Univ. Farm	Jefferson	.....	14	.....	.....	.....	.....	.....	.....	.....	5.90	+ 1.18	4.00	0.0	6	13	13	4	ne.	F. L. St. Martin.
St. Francisville	West Feliciana	115	5	.....	.....	97	1	50‡	30	32‡	14.07	.....	13.50	0.0	2	.....	.....	.....	ne.	L. P. Kilbourne.
Sugartown	Calcasieu	.....	17	77.6	+ 0.4	94	2	49	29	29	0.61	− 2.51	0.61	0.0	1	12	16	2	.....	G. W. Richardson.
Tallulah	Madison	91	1	76.5	.....	102	10	38	29	45	3.75	.....	3.40	0.0	3	13	16	1	.....	G. P. Blair.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings
† Also on other dates.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
ª, ᵇ, ᵉ, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2—*Daily precipitation for September, 1909. District No. 7, Lower Mississippi Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado.																																	
Blaine	Cimarron																																
Buena Vista	Arkansas																																
Calhan	Big Sandy	.09	.67	1.41	.31	.81		.16	.01	.30			.08	1.05					.09			T.	.24										5.22
Canon City	Arkansas				.80	1.25	.05	.15		.05	.03			.91									.10									3.34
Colorado Springs	Fountain	.20		.66	1.08	.92	T.	.88	.01	.03	T.		.05	.71					T.			T.	.09									4.63
Cripple Creek	Oil Creek	.63		.23	1.16		.03	.27		T.	.63			.57					.05				.15									3.72
Cuchara Camps	Cucharas			.10	.88	.85							.22	.88								.12										3.05
Eads	Big Sandy														1.37																	1.37
Fairview	St. Charles																																
Florence	Arkansas				1.65		.30	.30					.40									.20										2.85
Garfield	Little Arkansas	.02	.03		.60	1.55	.41	.12		.03	.01		.20	.50				.10	.04													3.61
Glen Eyrie	Fountain			.43	.73	.95	*	.34		.44			*	.48									.09									3.46
Hamps	Big Sandy			.33	.37	.66	.05		.09	.19				.48									.17									2.34
Hermit Lake	Grape Creek																																
Hoehne (near)	Purgatoire			.20	.11	.80	.60	.07		.06	.04	T.	.54	.70																		3.12
Holly	Arkansas					.15					.04		.05	1.10																		1.34
Lake Moraine	Fountain	.02	.22	.65	.75	.53	.11	.27	.02	.15	.15			.70								.24	.09									3.90
Lamar	Arkansas				.97	.10					T.		.20	1.05																		2.32
Las Animas	do			.73	.13	T.	T.	.43	.13				1.07	.23																		2.72
La Veta Pass	Cucharas			.10	1.22	.74	.25						.30	.36								.10										3.07
Leadville	Arkansas	.26	.02	.04	.10	1.10	.18	.22	T.		.23	T.	.15	.54					T.			T.				T.						2.84
Limon (near)	Big Sandy			.19	.47	.38	T.		.31	.15				.62									.11									2.23
Marshall Pass	Arkansas				.30	1.00	.65	.04	.09				.18	.45																		2.71
North Lake	Purgatoire		.45	.62	.42	1.25	.12			.02	.15		.10	.25									.80									4.18
Pueblo	Arkansas			T.	1.83	.31	.05	.64	T.	.15			.60	.35								T.	T.									3.93
Rockyford (near)	do																																
Saint Elmo	Chalk Creek	.41	T.	.25	T.	1.33	.19	.39	.15				.44	.37					T.														3.53
Salida	Arkansas	T.				1.62	.20				.05		.46	.41																		2.74
Santa Clara	Cucharas		.15	.15	4.65	.10	.35	T.	T.	.62	.65		.12	1.07									.21									7.47
Sheridan Lake	Arkansas				.84	.10			.09				.02	1.31																		2.36
Stonewall	Purgatoire		.08	.16	.15	1.60	.39	T.		T.	.04		T.	.42									T.									2.84
Trinidad	do																																
Victor	Oil Creek	.73		.11	.33	.40	.13		.43	.54			.02	.67	.02				T.	T.			.22									3.60
Vilas	Cimarron				2.89	.24	.35	.31					.74	.06																		4.59
Westcliffe	Grape Creek	.05		.03	.65	.81	.35						.05	.35								.01										2.30
Winfield	Clear Creek	.01	.01	.20	.11	1.40	.17	.14	.01		.01		.24	.41		T.			T.							T.						2.71
Wortman	Arkansas	T.		.40	.75	1.20	T.	T.					.12	1.30		T.						T.										3.77
New Mexico.																																	
Abbott	Canadian				.27	2.45				.63																						3.35
Albert	do			.34	.50	1.71	2.15			.16																						4.86
Arch	Red																																
Aurora	Canadian			.03	.10	2.65	.18			.04	.59	.02	.03	.17																		3.81
Bell Ranch	do			.19	.69	1.71	.13		.05	.05			.11	.27																		3.20
Black Lake	do				.14	1.61	.02			.05	.45			.10																		2.37
Cabeza	do					1.35	1.67	.12	.05				.15	.11																		3.45
Campana	do				.20	.87	.52	T.		.78	.22		.10																			2.69
Chacon	do				.20					.31	.55																					1.06
Cimarron	do		T.	T.	.06	3.26	.12	T.			.21	.03	.03	.03																		3.74
Clayton	do					.74	1.02		T.		.30																					2.06
Cuervo	do				.30	.19	.12	.14	T.			.02	.36	.11																		1.14
Dawson	do				*	2.20					.05		.05																			2.30
Dorsey	do																																
Elizabethtown	do		T.	T.	.03	.82							.06	.08																		0.99
Fort Union	do			.12	1.00	1.45				.45			.25					.10														3.37
Hayden	do					1.67	.68	.18																								2.53
Lake Alice	do				1.00	.65			.14		.42		.93	.89																		4.03
Logan	do				.67	.73			.30				1.20	.13																		2.43
Los Alamos	do		.02		.25	1.16	.72			.43																						2.56
Maxwell City	do				*	1.47	.40	.50			.60	.02	.56																			3.55
Melrose	Red					.67		.90	.46	.08																						2.11
Miami Ranch	Canadian				*	3.33	.20	T.		.03		.67																				4.23
Montoya	do					.53		.03					1.46	.11																		2.13
Nara Visa	do				.20	.47		.08	.51	T.			.85	.08																		2.19
Raton	do		.04	1.18	.03	1.84			.01	.53	.26	.01	1.55	.91						T.												6.30
Rociada	do					1.27	.51			.03	.25																					2.06
Roy	do				.01	1.00	4.06				.15		.04																			5.26
San Jon	do				.40	.44	*	.07	.70				.33																			1.94
Solano (1)	do				T.	1.38	2.30				.22			.16																			4.06
Solano (2)	do				.86	.53	2.30	.64			.22		T.	.20																			4.15
Springer	do				*	1.80	.40					.30																					2.50
Taylor	do				2.00	1.45	.63		.14									.03														3.65
Trementina	do			.09	1.65	3.80	.47			.11		T.	.15																			5.67
Tucumcari (1)	do				*	.39		.02			.02		.34																			0.77
Tucumcari (2)	do				.42		.05		.09				.29																			0.85
Vermejo Park	do		T.	.40	.08	1.37	T.			.20				.15																		2.20
Wagon Mound	do		T.	T.	T.	.76	1.49			.03	.03																					2.31
Texas.																																	
Amarillo	Canadian				.47	.20	T.	1.49					.03	T.					T.													2.19
Arthur	Red	.73													.18							.08										0.99
Bonham	do											T.			T.																	T.
Canadian	Canadian																																
Channing	do																																
Childress	Red													67					20	.17												1.04
Chillicothe	do													.18					.08													0.26
Clarendon	do													.60																		0.60
Clarkesville	do														T.	T.					T.											T.
Claude	do																			.47												0.47
Dalhart‖	Canadian				.81	.10	.41	.25	.08		.05	.42																					2.12
Denison	Red	.38					T.								T.																		0.38
Henrietta‖	do	T.													.28																		0.28
Hereford	do					1.50		T.																									1.50
Higgins	Canadian																																
McLean	Red																																
Memphis	do													.88																		0.88
Miami	Canadian					T.	.10						.63		.93				.10													1.76
Mobeetie‖	Red																																
Nazareth	do					.75	.05				T.		.32						T.	.04												1.16
Ochiltree	Canadian				.21								.50						.15													0.86
Pampa	do					.05							.10						.35													0.50
Paris‖	Red	.36																				.12										0.48
Plemons	Canadian				.07	.61		.12		.12				T.					.22													1.14
Quanah	Red													T.	T.																	T.
Sherman‖	do	.90													T.																	0.90
Sulphur Springs	do					.07									.54						T.											0.61

TABLE 2.—*Daily precipitation for September, 1909. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Cont'd.																																	
Texline	Canadian																																
Tulia	Red					T.								.60																			0.60
Wichita Falls	do												.50																			0.50
Kansas.																																	
Anthony	Arkansas							2.04						.15																			2.19
Ashland	Cimarron						.02	.25	.15	.13			.10	1.92																			2.57
Burlington	Neosho		.10		.01		.67	.10	.03		.02				.47																		1.40
Chanute	do												T.	1.00																			1.00
Cimarron	Cimarron												1.20	T.																			1.20
Coldwater	do	.05					.04	.54	.04	.04			.19	2.08					T.														2.98
Columbus	Neosho		.01		.09		T.	.55					.21	.19	.58					T.	.01											1.64
Coolidge	Arkansas												1.52	.20																			1.58
Cottonwood Falls	Neosho		.01		.03			.17		.04	.32				.01				T.				.65										0.63
Council Grove	do							1.06	.02														.01										1.09
Cunningham	Arkansas							3.30					T.	.35					.05														3.70
Dodge City	do	.07			T.		T.	.29	.19				.59	.35					.01														1.50
Eldorado	do							.86			.02				T.																		0.88
Ellinwood	do			T.	T.		.22	.06	1.66	.01	.02	.02	.93	2.54					T.	.01	.23											5.70
Emporia	Neosho		T.				.50	.35		.07	T.				T.																		0.92
Eureka	Verdigris							.92							.06																		0.98
Fall River	do							.70						.01	.45																		1.16
Fargo	Cimarron				.03		.35	.11						1.01																			1.50
Fredonia	Verdigris		T.					.70	.02					.33	.53						.17												1.75
Garden City	Arkansas			.25				.15		T.	T.		.80	T.																			1.20
Great Bend	do																																
Greensburg	do				T.		.01	.40	.40				T.	2.05					.07	.24													3.17
Grenola	Verdigris						T.	2.10						.04	.09																		2.23
Howard	do							2.79	T.					T.	.45																		3.24
Hugoton	Cimarron													.40																		0.40
Hutchinson	Arkansas				.03		.51	.32		.02			.10	.05																			1.03
Independence	Verdigris				1.45			1.42	.05					1.10	.55						.06												4.63
Iola	Neosho	.01					.97	.08					T.	.33	.33					T.	T.												1.72
Jetmore	Arkansas	.10			T.			.04	.22		.19		.85	1.85																			3.25
Kingman	do						T.	1.61			T.			.12					T.														1.73
La Crosse	do	T.		T.		T.	.03	.30					.33	2.10					T.		.50												3.26
Lakin	do				T.	T.	T.	.02				T.	.48	T.																			0.50
Larned	do						.07	.54	.29		.64		.03	2.26																			3.83
Lebo	Neosho	T.			T.		2.60	.05	.02	T.				.28	.21					.01													3.17
Le Roy	do	.12					.97	.05			T.			.82																			1.96
Liberal	Cimarron					T.	T.	.06	1.28	.30			T.	.68						.63													2.95
Macksville	Arkansas			T.			.42	.13	T.				2.60	.19					T.														3.34
McPherson	do							.33	.03					.61	.10																		1.07
Madison	Verdigris		T.				T.	.60	T.		T.				.05																		0.65
Marion	Neosho				T.		.05	.46	.06	.04				T.	.03				T.				T.										0.64
Medicine Lodge	Arkansas						1.10		T.				T.	.52					.05														1.67
Medora	do																																
Mt. Hope	do							1.63						.07																			1.70
Neosho Rapids	Neosho		T.				•	2.02	.05						.10																		2.17
Ness City	Arkansas																																
Newton	do				T.		.18	.50		.03				.05	.01																		0.77
Norwich	do						.21	.77						.11	.04																		1.13
Oswego	Neosho	.12	T.		T.			.67													.33												1.12
Pratt	Arkansas				T.		2.25		.15										T.														2.40
Rome	do						T.	1.77						.06																			1.83
Sedan	Verdigris							1.80	.47						.16																		2.43
Toronto	do						.90		.30						.50																		1.70
Ulysses	Cimarron						.20					.40																					0.60
Walnut	Neosho						.25	T.	T.					.40	.77						T.												1.42
Wichita	Arkansas	T.					.61	1.08						.08								T.											1.77
Winfield	do							3.25							.10																		3.35
Yates Center	Verdigris																																
Oklahoma.																																	
Ada	Canadian																																
Alva	Arkansas																																
Apache	Canadian													1.65	.35					.05													2.05
Arapaho	Washita	.35				T.								.55																			0.90
Ardmore	Red	.15													.08																		0.23
Bartlesville	Arkansas							.58						.48	.13					T.													1.19
Beaver	Canadian					T.		.25	T.	.47		.01	.11	.68																			1.52
Blackburn	Arkansas							.11						.07	.65																		0.83
Buffalo	Cimarron																																
Cache	Red						.29						1.41																				1.70
Calvin	Canadian	.04				.02		.20							.17					T.													0.43
Chandler	do	T.				.24	T.	T.							.20						.03												0.47
Chattanooga	Red													.59	.53																		1.12
Chickasha	Washita													.40																			0.40
Cloud Chief	do					.77								.65																			1.42
Dacoma	Cimarron																																
Durant	Red	.06				T.		.14							.06																		0.26
Eldorado	do													.28																			0.28
Enid	Cimarron	1.23				1.28		.69	.02					.01	.82																		4.05
Erick	Red													.49																			0.49
Fairland	Arkansas				.07			.17							.38																		6.62
Fort Gibson	do	.09				.10	.12							.60	.43																		1.34
Frederick	Red												1.31																				1.31
Gage	Canadian				.32			.03					1.10																				1.45
Guthrie	Cimarron				.70	1.82								.42	.03						.98												3.95
Guymon	Canadian					.15			.87				.51																				1.53
Harrington	Red					.88		.07						.95					.22														2.12
Hartshorne	Canadian	.32					.10								.50																		0.92
Healdton	Red														.65						T.												0.05
Hennessey	Cimarron					T.	.14	T.						.68																			0.82
Hobart	Red					.35								.46					T.														0.81
Holdenville	Canadian					.60	.10								.41																		1.11
Hooker	do					T.	T.		.57				.71	.28																			1.56
Hurley	do					1.20		.20					T.																				1.40
Idabel	Red																																
Jefferson	Arkansas					.25	.20	.50						.50																			1.45
Kenton	Cimarron			T.		.30	.33	.11		T.				.52																			1.26
Kingfisher	do				.92									.69						T.													1.61
McAlester	Canadian																																
McComb	do					.26																											0.26
Mangum	Red	T.												.73	.07				T.	T.	T.												0.80
Marlow	Washita														.14																		0.14

TABLE 2.—*Daily precipitation for September, 1909. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oklahoma—Cont'd.																																	
Meeker	Canadian					.55								.01																			0.56
Muskogee	Arkansas													.42	.29																		0.71
Mutual	Canadian													.95																			0.95
Neola	Washita												1.91							.02													1.93
Newkirk	Arkansas							1.92													.40												2.32
Norman	Canadian	.01				.21	.13							.03	.23						.20												0.81
Okeene	Cimarron				T.	.21								.61	.01																		0.83
Oklahoma	Canadian				.36	.10	.04							.03							T.												0.53
Okmulgee	....do					.04									T.																		0.04
Pauls Valley	....do														.05					T.	.47												0.52
Pawhuska	Arkansas																																
Perry	....do					.16		T.						.24	.09						.70												1.19
Ravia	Washita					.12	.03								.15																		0.30
Sac & Fox Agy	Canadian					.23									.15						.05												0.43
Shawnee‖	....do			T.		.15	.43								.04																		0.62
Snyder	Red													.48																			0.48
Stillwater‖	Cimarron	1.21				.19		T.							.14																		1.54
Supply	Canadian	.10			1.23	.20	.10						1.20										.49										3.32
Tulsa (1)	Arkansas	.07					.04								.14																		0.25
Tulsa (2)‖	....do																																
Vinita	....do		T.		.05				.05				T.		1.00																		1.10
Wagoner	....do					T.		T.										.02															0.02
Waukomis	Cimarron				T.	.12	.25	T.						.52																			0.89
Weatherford‖	Canadian	.55	T.			2.19								.07	.27																		3.08
Webbers Falls	Arkansas	.14			.05		.70					.03	.60	.05	.43																		2.00
Whiteagle	....do					.09		.15						.02																			0.26
Woodward	Canadian				3.95	.63	T.	.05						.85																			4.88
Missouri.																																	
Belle	Meramec					T.		1.11	.10	.32				1.48	.33						.40												3.74
Birchtree	Black			.30	.22			.34	.27						.09	.35					1.15	.86	.10										3.68
Cape Girardeau	Mississippi																																
Caruthersville	....do																																
Dean	Neosho					.04		.05					.66	T.	1.51		T.																1.66
Doniphan	Black			T.	.23	1.06		.15	.49						.83						2.00												4.76
Farmington	Mississippi									3.25	.25				.50						2.00	.01											6.01
Gano	Meramec			.07		.16		1.09	.08	T.					.44						1.08	.65											3.57
Goodland	Black		•	.12	.08				1.96	.06					.73						1.18	.47											4.60
Greenville	Mississippi			T.	T.		.35	1.43	.22		.70					.55					1.91	T.	T.										5.16
Ironton‖	....do			.05	.02	.90	T.	.65	1.60		.70					.45					.05	2.15	T.										6.57
Jackson	....do			.07				2.48	.52	1.20					.74						2.60	.75											8.36
Joplin	Neosho													1.40	T.							.50											1.90
Koshkonong	Black			T.	.38	.25		T.	.10		.03			1.03	.11						1.14	.17	.63										3.24
Lamar	Neosho		T.					T.	.09			T.		1.00						T.	T.												1.09
Marble Hill	Mississippi		T.					1.36	.25		1.20					.55					2.00	.45											5.75
Mt. Vernon	Neosho				.50	.05		.25						.20	2.25						.05												3.30
Neosho	....do					.05	.02	.16						T.	1.93																		2.16
Oakfield	Meramec		T.	T.	T.		.04	3.07	.02	.62					1.20	.33					1.32	.22											6.82
Olden	White			.08	.35			.12							1.52						1.10	.27											3.44
Sikeston	Mississippi			T.	T.	1.30	T.	1.50	.35		.25					.45					2.30		.42										6.57
Springfield	White		.04		.20	.02		.29					.01	.01	.01						.08	.03											0.69
Steelville	Meramec					.25		1.05	.25	T.					1.35						.65	T.											3.55
Willow Springs	White		T.	T.	T.	T.		.55							1.19						.64	.12											2.50
Kentucky.																																	
Blandville	Mississippi			.03	.60			.84		1.93					.10						1.72	.57											5.79
Lynnville	....do					1.40		.66	.48	T.	1.31					.44					1.36												5.65
Tennessee.																																	
Arlington‖	Mississippi					.52			.25		T.				T.						.20	1.45	.15										2.57
Bolivar‖	....do					.95			.50		.32										.45	.88	T.										3.10
Brownsville‖	....do					1.46			.33	.23	.60					T.	.32				.67	.97	.10										4.68
Covington‖	....do					.75			.05		1.06					T.					1.00	.25	.75										3.80
Dyersburg‖	....do								T.	.57	.97										.80	1.30	.10										3.[illegible]
Jackson	....do				•	.55		.88	.22		1.12										1.24		.48										4.79
Kenton	....do			.05	.09	.71		1.72	.32		1.73										1.21		.07										5.90
Memphis	....do				1.21	.17		.11		T.	T.					T.	T.				.05	2.32	.21	.02									4.09
Milan‖	....do				T.	1.06			.45	.11	1.54				T.		.48				.40	.50	.01										4.55
Trenton	....do			T.	.70	.22		.62	.22		1.94					.30					1.46												5.46
Union City	....do					1.40				.30	1.36										1.82												4.88
Arkansas.																																	
Alicia	White					.50	T.														2.00	1.00											3.50
Amity	Ouachita	T.				.06						T.									T.	.93											0.99
Arkadelphia (near)	....do					.05							T.		T.					.24	.12	.83											1.19
Arkansas City‖	Mississippi											.50			.30						3.10	.10	1.36										5.36
Batesville (1)	White					.46				.20	.62					.06					1.18	.70	.26										3.48
Batesville (2)‖	....do																																
Bee Branch	Arkansas					.90					.15		.40		T.						1.10	1.00											3.55
Benton	Ouachita										.85				.05						1.66	.17											2.73
Bentonville	Arkansas				.52								.02	.72	.12						.01												1.39
Bergman	White													.12	.05						.70												0.87
Black Rock‖	....do					.79					.24					.02					1.55	.52	1.32										4.44
Brinkley‖	....do					.93										.16					1.65	.30	.16										3.20
Calico Rock‖	....do				1.30											.74					.48	.62											3.14
Camden‖	Ouachita				.02			.16				.60				.26					2.20	.06											3.30
Centerpoint	Red																																
Clarendon‖	White					.44					.60	.07	.04			.34					1.78	.12	.95										4.34
Conway	Arkansas				.22	.10					.62			T.	.15						T.	1.64		.46									2.59
Corning	White		T.	.02		.18		.12	.21	T.	.09					.79					1.92	.03											3.36
Dardanelle‖	Arkansas					.24	.50				T.				T.						.34	.38											1.46
Dodd City	White				.25					.23	.08										T.	1.25	T.										1.81
Dutton	....do					.37															.08												0.45
Earl	St Francis				1.82	1.72		.13													2.32		.73										6.72
Eldorado‖	Ouachita						T.						.50			.65					T.	3.05	.01										4.21
England‖	Arkansas					.22	T.		T.		.16			T.							.22	1.95	.20	.75									3.50
Eureka Springs	White																																
Fayetteville	....do					.14							.06		.35						.04												0.59
Fort Smith	Arkansas	.01				.31	.02			T.			T.	T.	.03						.01	T.											0.38
Fulton‖	Red					.74															.30												1.04
Hardy	White				T.	1.47		T.		.01	.04				.33	.02					T.	1.66	.70	.28									4.51
Helena (1) ‖	Mississippi					.10	T.								.06						2.34	.52	.26	T.									3.28
Helena (2) ‖	....do																																
Hot Springs	Ouachita			.40										1.23							1.17	1.43											4.23
Huttig	....do									14		.09	.60								.47	2.35											3.65
Jonesboro	White					1.40								1.15							.20		3.04										5.79
Junction	Ouachita																																
Lacrosse	White																																

TABLE 2.—*Daily precipitation for September, 1909. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Arkansas—Cont'd.																																	
Lake Farm	Arkansas					.24															2.02	.21	1.20									3.67
Lewisville	Red					.54										.07					.40	.45	.05									1.51
Little Rock	Arkansas			T.	.51	.28						T.	T.		.06						.43	1.56	.33									3.17
Lutherville	do					.08	T.				T.											.59										0.67
McNeil	Ouachita																																
Malvern‖	Ouachita					.62	.15				T.			T.		.10						1.19	.10	.37									2.53
Mammoth Spring	White				.03	1.35		.04			.10				1.21	.07						1.26	.48									4.54
Marked Tree‖	St Francis					1.05		.25														1.96	.63									3.89
Mena	Ouachita	.03						.31		.37		T.										.15										0.86
Mossville	White				.80								T.	.35								.61										1.76
Mount Nebo	Arkansas																																
Newport (1)‖	White					4.27								1.00		.14					.03	1.72	.35	.54								8.05
Newport (2)‖	do																																
Ozark	Arkansas					.28																.22										0.50
Pine Bluff‖	do						.10									.05					2.50	.15	.70									3.50
Pocahontas	White					1.20		.15	.06		.60											1.90		.35								4.26
Pond	Arkansas	.12			T.								.09	.06	.95																	1.22
Portland‖	Ouachita											.30			.40						12	2.10	.08	.20								3.20
Prescott‖	do						T.						T.	.04		T.					T.	1.05	.40	.05								1.54
Princeton	do																																
Rogers	Arkansas				T.									.10	.26							.03										0.39
Russellville‖	do																																
Spielerville	do					1.39		.65					T.									.23										1.67
Springbank‖	Red						.20									.88						.60		.07								1.75
Stuggart	Arkansas					.11					1.20		.03			.02					T.	2.37		1.39								5.12
Texarkana‖	Red						.42										.01					.33		.05								0.81
Warren‖	Ouachita											.26				.21						2.43										2.90
Whitecliffe‖	Red						.05						T.									.03		.40								0.48
Wiggs	Ouachita						.26			.12	T.		.94	T.	.86						T.	.64	T.									2.82
Wynne‖	St. Francis					.78			.20			.10				.05						1.54	.89	1.15								4.71
Mississippi.																																	
Anguilla	Yazoo										T.					.87					T.	3.75										4.62
Austin	do				T.	.06						T.										2.87		1.04								3.97
Batesville‖	do						.20		.45													2.10	.24	1.17								3.16
Byhalia	do				1.87	.72																1.82		.34								4.92
Canton	Big Black										.18										.03	2.20		.03								2.44
Clarksdale	Yazoo					T.																2.00	.30	.21								2.51
Coffeeville	do				T.		T.			.01	T.	.20				.11					T.	2.05		.06								2.43
Corinth‖	Mississippi			T.		.52	T.		.14		5.25						.08					.26	1.56	.14								7.95
Crenshaw	Yazoo				T.	.07														T.	T.	1.86	T.	.90								2.83
Denmark	do	.60			3.03	.03					.65	.10			.70	.12						1.70		.45								6.38
Duck Hill	do																																
Edwards	Big Black			.04		T.					.30			.70		T.				.12	.20	3.95										5.21
Enid	Yazoo									.32	.02										.02	2.30		.15								2.81
Fayette	Mississippi								T.		3.25			T.		.10						5.06										8.41
Greenville‖	Yazoo											.03		T.	.04							3.52	.04	.72								4.35
Greenwood‖	do							.04									.32			T.	T	2.86	.06	.20								3.48
Grenada	do							.03			.54											3.07	.14									3.78
Hernando‖	do					1.70							.10									1.80	.60	.89								5.09
Hickory Flat	do				.37	.38				.10	T.	.18				.10						1.55		.58								3.26
Holly Springs‖	do				T.	1.22						.10										1.22	.80	.06	T.							3.40
Kosciusko‖	Big Black	.06						.06				.03				.45	.80			.25		1.34	.06									3.05
Lake Comorant	Yazoo				.20	.62																2.26		.50								3.58
Lula	do					.12																2.40		.25								2.77
Malone	do				.30							.41										1.90	.25									2.86
Marks	do							.33				.11										2.58	.23									3.25
Natchez‖	Mississippi			.05							T.	.11		.07	1.80							5.34	.03									7.40
New Albany	Yazoo				.53	.25			.17	.16						.36						1.16		.28								2.91
Pontotoc	do				.40			.50		.15	.25					.25					T.	2.00										3.55
Port Gibson‖	Mississippi			.10					T.	T.	.90		T.		T.						T.	3.00	.05									4.05
Ripley	Yazoo				1.10																	1.60										2.70
Rosedale	do														.02							.46	.20	1.90								2.52
Senatobia	do				1.13	.11						.43	.07									2.31	.80									4.85
Shoccoe	Big Black						.21				.35					T.					T.	1.78										2.34
Suffolk	Mississippi						.21		.55		.07		T.	T.	T.	.28				T.	1.50	.58	.10									3.29
Swan Lake‖	Yazoo							T.														2.00	.30									2.30
Tchula	do							T.			1.55			.40		1.40			T.			10	2.90		T.							6.35
University	do																																
Utica	Mississippi		.36			T.	T.	.51			.35	.02		.15		.13					.06	.44	3.50									5.52
Vicksburg	do		.31	T.							.29			.63		.01					.01	1.64	2.07		T.							4.96
Water Valley	Yazoo	T.		T.	.08			.06	.05	T.	T.					1.60						2.20	T.	T.								3.99
Woodville	do		.58						.07	T.	.60	.03	.13			.03					1.95	4.10	.20									7.69
Yazoo City‖	do								T.			.70						T.				3.02	.02	T.	T.							3.74
Louisiana.																																	
Abbeville	Coast		1.69		.11				.30					.08		.18	.24				1.20	4.72	.01									8.53
Alexandria‖	Red	.10								.35				.50			.30					2.20										3.35
Amite‖	Coast	T.		T.				T.		2.13	.65	.10		.45	.13		.15					.24	.50		T.							4.35
Baton Rouge‖	do			.06						T.			.45		.50							1.15	5.00									6.16
Burnside	do		.48	.05			T.			.20			T.							T.	5.60											6.33
Burrwood	do									T.				.20	.30	.20	.64	.73		.30	2.50				T.							4.87
Calhoun	Ouachita					.09					.54											.40	2.10									3.13
Cameron	Coast																																
Cheneyville‖	Red	.48															.08					3.20										3.76
Clinton‖	Coast		T.	T.				.56		.63	.03		.81		.34		T.					5.90										8.27
Collinston	Ouachita					.07					.33		.10								2.00											2.50
Covington‖	Coast	1.27	.29	.27				T.	.23	T.	.11		T.			.07	.28					.07	3.35	T.								5.94
Dodson	Red									.86												.44	1.62									2.92
Donaldsonville‖	Coast	T.			.05								T.				T.					.35	4.60									5.00
Farmerville‖	Ouachita					1.36							T.								3.05											4.41
Ferriday	do										.98										3.35											4.33
Franklin‖	Coast	T.	.19		.26	T.					.16		.09	T.	.01		1.02					.31	5.40	.02		T.							7.46
Grand Cane‖	Red						.85									.71						1.09										2.65
Grand Coteau	Coast		.75	.04	T.				.35			.20									2.25	1.55										5.14
Hammond	do	1.10					T.	1.70	.82	.62	T.			.15							3.20											7.59
Houma‖	do																																
Jennings‖	do	.24			.10	.45					.22				.28							1.65										2.94
Lafayette‖	do				.09					T.	.15		.04		.01	T.						.04	5.09	.01								5.43
Lake Charles‖	do					1.37								.12	.17							2.57										4.23
Lakeside	do						.18			.75						.49					1.30	.25										2.97
Lawrence‖	do			.10	.44				.40			.38			.25		.45					3.20										5.22
Liberty Hill	Red					.06							.37	T.						T.	.52	2.75										3.70
Logansport‖	Sabine						.40									.40						1.30										2.10
Melville‖	Red				.52					T.											T.	6.90	.12									7.54
Minden‖	do						.04						.13			.38						1.12	.10	.53								2.10

TABLE 2.—*Daily precipitation for September, 1909. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Louisiana—Cont'd.																																	
Monroe‖	Ouachita						.22					.12			.22							1.98	T.										2.54
Morgan City‖	Coast	.52								.34	.30			.20			.12	.38			.48	2.08										4.42
Newellton	Mississippi										.15			.10							T.	2.75										3.00
New Iberia	Coast	T.	.40	1.20	T.			.20	.10	.60				.20	.20		.20				6.50	1.00										10.60
New Orleans (1)	...do		.56				.25	T.	.05	.05	T.			1.38	.78	.10				.09	4.42	T.										7.68
New Orleans (2)	...do		.07				.07		.41	.15				.99	.19		.01				4.65											6.54
New Orleans (3)	Coast		1.08		.28				.12					1.42	.98	.12				.06	4.33											8.39
New Orleans (4)	...do		.04				.04	.02	.36	.11				.97	.17	.01				.08	4.60	.01										6.41
New Orleans (5)	...do		.07				.56	.61	.15	.20				.59	1.08					.06	4.34	.02										7.08
New Orleans (6)	...do		.40				.25		.02	.05				1.10	.80	.06				.09	4.38	.02										7.08
New Orleans (7)	...do		.45						.01					.50	.03	.18				.04	4.38											5.59
New Orleans (8)	...do		.33						.05	.05	.04			.30	.15	.05				.09	3.54	.01										4.61
Opelousas‖	...do	.31		.05		.25				T.											5.54											6.15
Plain Dealing	Ouachita											.35				.08					.35	.49		.35								1.62
Rayne‖	Coast	T.							.25	T.				T.		.60					2.90											3.75
Reserve‖	...do	.55											.84		.42						3.93											5.74
Robeline‖	Red	.04															T.				1.99											2.63
Ruston	Ouachita																				.50	1.50										2.00
Schriever‖	Coast	T.									.15			.10	.71		.56	.19			2.10	4.83	T.									9.74
Shreveport	Red					.03						.18	T.		.15						.48	.28	.34									1.46
Simmesport‖	Red											.34		.04							.06	3.68	.12		.01							4.25
Southern Univ. Farm	Coast		.05		T.				1.20	.05	T.			.55	T.					.05	4.00											5.90
St. Francisville‖	Mississippi							.57														a										14.07
Sugartown	Red																					.61										0.61
Tallulah	Mississippi					.07					.28											3.40										3.75

a indicates 13.50.

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 7, Lower Mississippi Valley.*

Date.	Colorado.						New Mexico.				Texas.				Kansas.										Oklahoma.			
	Lamar.		Leadville.		Pueblo.		Albert.		Cimarron.		Amarillo.		Paris.‡‡		Dodge City.		Ellinwood.		Iola.		Liberty.		Wichita.		Ardmore.‡‡		Bartlesville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Mid.	Max.	Min.	Max.	Min.	Max.	Min.
1	100	64	64	42	89	59	96	65	86	47	95	62	96	71	94	70	90	67	88	67	.....	.....	87	68	97	69	96	68
2	98	60	67	43	92	59	98	68	86	49	95	68	99	72	96	73	94	72	94	69	.....	.....	95	74	100	70	98	71
3	92	64	63	40	87	59	92	69	83	52	92	65	99	72	100	67	95	64	96	68	.....	.....	96	68	100	72	102	73
4	83	61	59	38	70	56	83	62	69	49	90	65	100	73	79	63	85	66	90	65	.....	.....	88	66	100	72	104	78
5	66	51	51	40	56	51	91	59	65	53	70	60	99	74	76	54	80	51	78	57	.....	.....	80	56	93	69	84	64
6	78	57	54	39	71	54	79	59	73	55	88	62	98	72	90	65	88	63	87	62	.....	.....	86	64	97	70	93	65
7	75	58	57	40	73	58	81	60	76	49	87	65	100	71	70	59	73	61	83	68	.....	.....	80	67	101	71	82	70
8	85	62	58	37	80	54	85	61	77	47	88	62	101	71	88	63	89	63	93	68	.....	.....	90	66	100	69	98	74
9	87	61	64	32	77	55	85	59	72	49	87	60	102	71	92	69	94	67	95	70	.....	.....	93	68	101	70	101	73
10	92	60	61	34	82	55	83	60	70	50	89	62	105	72	93	67	95	63	95	68	.....	.....	92	70	105	69	101	68
11	93	60	61	35	85	61	81	61	70	48	90	66	106	73	95	68	98	65	99	68	.....	.....	95	71	105	72	102	67
12	87	60	56	34	67	45	84	61	72	50	85	67	103	74	91	64	95	64	97	76	.....	.....	96	75	102	74	101	74
13	64	48	42	26	56	43	86	51	63	42	69	49	99	73	70	53	75	64	93	68	.....	.....	82	65	99	75	97	73
14	78	43	53	25	74	43	78	46	68	37	76	46	86	72	74	51	75	53	73	60	.....	.....	74	57	81	62	79	65
15	84	45	63	29	77	44	78	55	71	40	77	48	91	62	80	51	81	51	76	54	.....	.....	80	53	85	59	81	55
16	87	46	64	32	81	48	79	49	72	41	80	52	91	62	85	55	90	56	84	49	.....	.....	86	55	90	59	86	51
17	83	45	62	31	77	44	77	49	74	38	78	50	92	61	83	52	87	53	89	56	.....	.....	88	60	93	56	93	57
18	89	59	53	33	81	52	86	53	76	41	85	61	94	58	84	62	84	57	88	59	.....	.....	85	61	93	55	92	60
19	81	49	56	33	82	46	89	56	78	45	88	60	98	59	86	56	90	59	88	64	.....	.....	87	64	96	67	92	62
20	91	57	60	35	84	52	87	54	80	42	86	56	94	65	86	58	88	57	89	64	.....	.....	88	63	94	64	93	62
21	79	53	54	40	73	44	91	56	81	46	91	58	96	68	82	58	90	60	87	62	.....	.....	87	65	97	63	94	62
22	80	40	44	17	57	44	73	46	66	35	68	48	96	69	67	47	72	53	69	53	.....	.....	70	55	81	73	74	61
23	86	45	57	22	66	36	71	42	68	32	74	45	86	56	74	47	78	44	74	44	.....	.....	75	45	80	52	77	46
24	84	40	59	28	76	39	78	44	79	36	78	50	86	51	80	47	84	42	79	45	.....	.....	81	51	86	47	84	45
25	85	42	66	34	79	42	81	44	79	41	79	49	86	51	81	56	85	48	79	49	.....	.....	81	52	86	48	83	46
26	83	58	65	32	81	46	75	45	73	39	76	47	82	51	78	48	80	46	72	46	.....	.....	74	51	80	49	75	46
27	82	51	67	33	75	45	75	43	73	34	75	46	81	47	74	45	77	41	71	40	.....	.....	71	44	78	46	73	42
28	82	37	68	34	81	42	83	46	77	38	81	46	82	46	82	47	87	40	78	36	.....	.....	80	45	83	41	73	40
29	85	38	67	37	79	45	85	53	81	41	86	46	91	46	85	47	91	44	88	48	.....	.....	88	51	90	44	92	48
30	88	46	64	33	81	45	84	51	81	42	84	52	93	48	85	49	91	45	84	53	.....	.....	87	58	93	51	92	48
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	84.2	52.0	59.3	33.6	76.3	48.9	83.1	54.3	74.6	43.6	82.9	55.8	94.4	63.7	83.3	57.0	86.0	56.0	85.2	58.5	.....	.....	84.7	60.3	92.9	61.9	89.7	60.5

Date.	Oklahoma.														Missouri.													
	Enid.‡‡		McAlister.		Mangum.‡‡		Muskogee.		Oklahoma.		Weatherford.‡‡		Woodward.		Caruthersville.		Ironton.‡‡		Lamar.‡‡		Olden.		Springfield.		Lynnville, Ky.		Jackson, Tenn.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	96	68	.....	.....	97	72	97	73	92	68	98	69	97	70	.....	.....	85	52	98	65	89	53	90	66	83	56	96	61
2	100	69	.....	.....	98	70	101	76	97	69	100	73	102	74	.....	.....	81	49	91	65	82	57	80	61	87	55	94	56
3	102	66	.....	.....	98	69	106	75	97	73	100	73	101	71	.....	.....	97	63	103	65	95	60	96	73	91	65	97	68
4	102	70	.....	.....	94	70	105	74	98	69	101	71	99	66	.....	.....	94	66	100	69	90	70	95	67	90	75	97	78
5	79	61	.....	.....	100	62	89	66	77	65	77	63	78	60	.....	.....	80	62	80	61	75	63	72	61	80	66	88	70
6	93	64	.....	.....	92	62	94	67	92	68	93	66	93	63	.....	.....	84	48	89	61	80	57	80	61	83	55	88	60
7	92	68	.....	.....	100	68	99	69	97	70	96	74	91	69	.....	.....	67	58	78	65	74	65	75	69	73	63	85	63
8	97	68	.....	.....	98	69	102	72	95	70	95	70	97	68	.....	.....	85	63	89	70	87	64	92	67	82	67	83	70
9	100	66	.....	.....	99	63	104	74	97	72	100	68	98	62	.....	.....	95	70	99	68	96	70	94	72	93	69	97	69
10	101	65	.....	.....	101	67	106	70	99	71	102	69	99	68	.....	.....	91	65	102	65	97	66	94	72	88	68	97	67
11	101	65	.....	.....	100	65	107	72	100	73	101	72	98	76	.....	.....	91	65	104	69	90	68	93	72	88	64	93	69
12	101	68	.....	.....	101	66	104	73	97	74	98	78	96	75	.....	.....	92	61	102	72	94	66	93	72	91	64	96	65
13	82	67	.....	.....	75	68	94	71	92	66	86	69	86	65	.....	.....	91	63	97	73	92	70	89	67	90	70	94	70
14	79	56	.....	.....	78	52	84	55	77	56	78	51	86	51	.....	.....	88	66	81	68	89	67	76	62	88	69	89	67
15	81	52	.....	.....	82	52	94	72	81	54	80	55	81	48	.....	.....	80	60	83	54	78	58	76	55	79	67	87	67
16	88	50	.....	.....	88	52	95	68	85	55	86	52	87	52	.....	.....	80	45	87	47	79	59	80	51	77	56	85	57
17	90	53	.....	.....	90	52	94	51	89	60	90	54	87	53	.....	.....	83	44	94	56	82	51	85	60	80	49	87	51
18	90	55	.....	.....	91	52	93	50	89	59	88	65	86	58	.....	.....	86	46	91	59	84	54	84	61	83	53	88	53
19	92	56	.....	.....	91	55	94	63	90	68	89	62	90	57	.....	.....	88	48	88	60	88	37	85	62	89	61	90	59
20	94	58	.....	.....	92	55	93	64	90	68	93	65	88	55	.....	.....	82	59	91	63	83	56	81	69	83	65	89	67
21	93	63	.....	.....	97	59	94	65	92	64	93	63	93	60	.....	.....	66	64	88	68	75	54	75	64	73	62	81	63
22	76	61	.....	.....	82	54	93	66	79	56	76	61	80	57	.....	.....	88	60	71	59	87	60	69	52	87	67	87	69
23	80	45	.....	.....	78	48	79	46	76	48	80	43	78	40	.....	.....	71	52	77	43	70	49	68	46	78	60	87	60
24	85	43	.....	.....	85	48	85	51	82	52	85	48	82	48	.....	.....	74	38	83	41	75	42	74	52	71	45	75	47
25	87	49	.....	.....	85	48	79	45	82	53	85	52	84	47	.....	.....	72	38	79	52	71	45	71	49	69	48	74	48
26	79	47	.....	.....	78	50	76	43	75	52	79	52	80	42	.....	.....	67	42	73	53	68	44	65	47	67	47	72	49
27	75	43	.....	.....	70	48	78	41	73	43	75	43	75	35	.....	.....	66	37	75	36	66	40	67	42	63	42	71	45
28	85	35	.....	.....	82	40	79	42	80	43	85	39	85	34	.....	.....	72	31	79	35	71	38	73	42	71	40	75	38
29	93	38	.....	.....	89	40	82	45	88	53	93	51	90	54	.....	.....	82	42	92	45	84	44	83	51	78	45	81	39
30	93	45	.....	.....	90	47	80	46	89	56	91	56	88	41	.....	.....	76	44	88	49	85	47	83	56	78	46	84	45
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	90.5	57.1	.....	.....	90.0	57.4	92.7	61.5	88.2	61.6	89.8	60.9	89.2	57.2	.....	.....	81.8	53.3	88.7	58.5	82.5	55.8	81.3	60.0	81.1	58.6	86.9	59.7

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 7*—Continued.

Date.	Tennessee.						Arkansas.										Mississippi.									
	Memphis.		Union City.		Bentonville.		Corning.		Dardanelle. §§		Eldorado. §§		Fort Smith.		Little Rock.		Pine Bluff. §§		Texarkana. §§		Wynne. §§		Clarksdale. §§		Corinth. §§		Greenville. §§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	92	69	89	63	93	71	88	56	100	63	99	66	57	24	93	69	93	69	94	73	94	69	94	72	96	72	93	63
2	93	72	94	63	100	72	94	64	104	69	96	70	101	74	96	74	100	72	102	74	96	72	96	72	96	72	96	69
3	94	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
4	95	72	96	65	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
5	94	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
6	93	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
7	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
8	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
9	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
10	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
11	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
12	91	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
13	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
14	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
15	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
16	91	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
17	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
18	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
19	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
20	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
21	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
22	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
23	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
24	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
25	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
26	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
27	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
28	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
29	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
30	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
31	92	72	96	64	100	72	97	67	104	69	96	70	102	76	96	74	100	72	102	74	96	72	96	72	96	72	96	69
Mns	81.7	64.7	85.6	58.5	86.0	59.3	84.7	59.6	91.9	59.6	89.4	62.7	89.2	63.6	84.9	64.7	90.1	61.3	91.1	64.5	85.3	60.5	88.3	61.1	83.6	61.2	89.6	63.5

Date.	Mississippi.																									
	Kosciusko. §§		Natchez. §§		Vicksburg.		Louisiana.																			
							Alexandria. §§		Baton Rouge. §§		Covington. §§		Lafayette. §§		Lake Charles. §§		Monroe. §§		New Orleans.		Robeline. §§		Schriever. §§		Shreveport.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	95	66	96	72	94	71	97	71	96	69	92	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
2	91	67	97	72	94	72	96	72	96	70	91	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
3	94	69	96	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
4	94	71	96	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
5	94	68	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
6	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
7	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
8	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
9	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
10	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
11	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
12	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
13	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
14	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
15	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
16	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
17	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
18	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
19	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
20	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
21	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
22	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
23	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
24	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
25	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
26	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
27	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
28	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
29	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
30	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
31	96	69	100	72	96	72	96	72	96	70	94	69	96	74	96	74	96	74	96	74	96	74	96	74	96	74
Mns	96.2	62.8	89.5	66.1	86.0	65.9	90.5	63.7	87.7	66.4	89.4	66.6	88.1	65.9	91.7	62.6	85.6	64.6	86.0	72.8	91.1	61.6	93.2	66.2	88.0	66.2

Climatological Data for September, 1909.
DISTRICT No. 8, TEXAS AND RIO GRANDE VALLEY.

BERNARD BUNNEMEYER, District Editor.

GENERAL CLIMATOLOGICAL CONDITIONS.

The month of September was marked by an excess of temperature in the greater portion of the district and by a general deficiency of precipitation. It was the driest September in Texas during the last eighteen years. The temperature averaged nearly normal in Colorado and over 1° above the normal in Texas, but there was a decided deficiency in New Mexico. In fact, so far as this territory is concerned, there has been but one September in the last fifteen years–that of 1902–which was colder than the month under discussion. While the precipitation was generally deficient, there was a moderate excess in Colorado, over limited areas in New Mexico, and in a few localities in Texas. In the last-named State showery conditions obtained locally at infrequent intervals until the 23d, after which date there was a period of clear, cool and invigorating weather. The amount of cloudiness, however, previous to that date was also considerably less than the normal. In Colorado and New Mexico the precipitation practically all occurred during the first two weeks of the month, and the number of rainy days averaged about five. A small amount of precipitation in both Colorado and New Mexico was in the form of snow, the greatest monthly snowfall being 4 inches at Platoro, Colo. The prevailing wind direction was southwest in Colorado and New Mexico, and south in Texas, and the wind movement was mostly light.

TEMPERATURE.

The month opened with warm weather prevailing throughout the district, and this condition continued with but little interruption until the 13th, when there was a sharp fall in temperature extending over Colorado, New Mexico, and the northern portion of Texas. During this cool spell the temperature fell to 30° at Garnett, Colo.; 34° at Fort Stanton, N. Mex.; and 41° at Plainview, Tex. It was of short duration however and did not affect the southern half of Texas. From the 16th to the 22d there was a constant increase of temperature, culminating in unusually warm weather, which was followed by a general and sharp fall of temperature on the 23d. Cool weather obtained in the greater portion of the district until the close of the month, and the lowest temperatures of the month occurred during its prevalence. In Colorado the temperature fell to 24° at San Luis; in New Mexico, to 27° at Fort Stanton; and in Texas, to 34° at Carmona and at Colorado. At some of the higher stations in Colorado and New Mexico, however, a lower minimum temperature occurred than that recorded at San Luis or at Fort Stanton, respectively. The first to the third were the warmest days of the month, although in Texas the temperature was abnormally high also from the 9th to the 11th, and from the 20th to the 22d. The highest temperatures reported were: In Colorado, 84° at Blanca; in New Mexico, 97° at Alamogordo and at Rincon; and in Texas,108° at Encinal, Fort McIntosh, Tilden, and Zapata. The daily range of temperature was greatest during the third decade, which was due to active nocturnal radiation under the influence of a strong anticyclonic area, but the variability of temperature from day to day was comparatively small throughout the month. The local monthly mean temperatures ranged from 47.9° at Hopewell, N. Mex., to 83.3° at Fort McIntosh, Tex.

PRECIPITATION.

The precipitation over the Rio Grande watershed was less than the normal, the deficiency being most marked over the lower portion from Fort Clark to Brownsville. Over the extreme upper portion there was an excess of nearly one-half inch. A similar excess occurred in New Mexico over a fairly long stretch from Taos Canyon to Mountainair, and there was also a slight excess over a limited area at Del Rio, Tex. Over the intervening and by far greater portions of the watershed the deficiencies ranged in New Mexico from 0.02 inch at Strauss to 0.93 inch at San Marcial, and in Texas from 0.85 inch at El Paso to 4.55 inches at Brownville. However, the general deficiency over the New Mexico portion of the watershed averaged only 0.12 inch and, considering the excess of nearly 0.50 inch in Colorado, the precipitation southward to the Texas border line averaged nearly normal. It is well to remember, in this connection, that practically all the precipitation occurred during the first two weeks of the month. The average precipitation over the watershed as a whole approximated 1.30 inches, which is less than 50 per cent of the amount received during the preceding month. The extremes of precipitation ranged in Colorado from 0.76 inch at Blanca to 3.07 inches at La Veta Pass; in New Mexico, from 0.08 inch at Orogrande to 3.88 inches at Swastika Ranch; and in Texas, from 0.00 inch at Fort McIntosh to 3.16 inches at Del Rio. Some snow occurred in the upper watershed, but the greatest amount did not exceed four inches.

Conditions in the Rio Pecos watershed were not as good as in that of the Rio Grande. There was a general deficiency of precipitation amounting to over one-half inch in the entire watershed except the extreme upper portion. The upper basin southward nearly to Santa Rosa was favored with an abundant supply of precipitation, the monthly amounts ranging from 1.60 inches at Windsors Ranch to 3.91 inches at Las Vegas. From Santa Rosa southward to the Rio Grande there was a general deficiency ranging from 0.37 inch at Carlsbad, N. Mex., to 3.04 inches at Fort Stockton, Tex. The average precipitation over the watershed as a whole was 1.16 inches, which is nearly 50 per cent less than the normal and only about one-half the amount received during August. The greatest local monthly rainfall was 3.91 inches at Las Vegas, and the least 0.12 inch at Pastura, both in New Mexico. In Texas the extremes were 0.50 inch at Barstow and 0.18 inch at Fort Stockton.

Throughout the watersheds of the remaining rivers in the district, comprising the Nueces, San Antonio, Guadalupe, Lavaca, Colorado, Brazos, Trinity, Neches, and Sabine, as well as over the coastal plains draining directly into the Gulf of Mexico, there was a general deficiency of precipitation averaging over 2 inches. In the Nueces drainage area the average precipitation was only 0.86 inch, which is about 35 per cent of that of the preceding month. The greatest amount was 2.17 inches at Sabinal, and the least 0.00 inch at Encinal. The San Antonio and Guadalupe watersheds averaged 1.20 inches or about one-half inch less than the August rainfall over the same area. A marked excess of over 1 inch occurred at Victoria below the confluence of these two rivers. The monthly rainfall at this place was 4.25 inches, the heaviest in Texas. There was no precipitation at San Marcos on the San Marcos River, which is one of the tributaries of the Guadalupe. In the Lavaca watershed the precipitation ranged from a trace at Hallettsville to 0.70 inch at Edna, and the average was less than 50 per cent of the August rainfall. The Colorado watershed was the most favored in the Texas portion of the district. It had an average precipitation of 1.51 inches, exceeding the August average by about 0.30 inch. Nevertheless there was a marked deficiency over the greater portion of its area. The heaviest monthly rainfall was 3.21 inches at Wharton, and the least 0.13 inch at Fairland. East of the Colorado there was a decided diminution in precipitation, the average over the Brazos watershed being only 0.95 inch, which is 1.40 inches less than it was in August. In several localities of the middle Brazos

watershed there was either no precipitation or the amounts were too small to be measured. The heaviest monthly amount was 2.52 inches at Hillsboro. The watersheds of the Trinity and of the Neches received considerably more moisture than that of the Brazos, the averages being 1.01 and 1.46 inches, respectively. These amounts were only about half of what they were in August. The precipitation over the Sabine watershed averaged only 0.88 inch or over 50 per cent less than in the preceding month. The heaviest monthly amounts in these last three watersheds were, respectively, 2.27 inches at Crockett; 3.05 inches at Dialville; and 1.46 inches at Longview. The least were, respectively, a trace at Jewett; 0.27 inch at Beaumont; and 0.21 inch at Wills Point.

RIVER CONDITIONS.

The volume of water carried by the rivers of the district was less than during the preceding month. There was a moderate rise in the upper Rio Grande from the 8th to the 11th, but it did not affect the river materially some distance south of the Texas-New Mexico border line. The extreme lower Rio Grande Valley was still flooded at the opening of the month, the crest of the August flood having nearly reached the mouth of the river. From Eagle Pass to Zapata the river was nearly normal, although there was a gradual diminution in volume from the first to the last of the month. There was, however, ample water in the stream for irrigating purposes. The Rio Pecos probably also carried sufficient water for irrigation; at least no report to the contrary has been received. The average depths of the Brazos and Colorado rivers were 1 foot less than in August and those of the Guadalupe, Trinity, Neches, and Sabine a fraction of a foot; and all these streams carried considerably less than the average September volume of water. In some of their portions the river stages were the lowest on record for September while some of the smaller tributaries were without running water.

MISCELLANEOUS.

The droughty conditions in Texas were very injurious to farming and gardening operations, and inhabitants, stock, and pastures suffered much because of lack of water. In some portions of Texas water had to be hauled in by trains at a considerable cost, and in others engines had to be installed for the purpose of pumping water for the cattle.

Frost occurred at most of the higher stations in Colorado from the 21st to the 24th. In New Mexico there was killing frost in several northern counties on the 13th and 14th, and a general light frost in southern counties on the 27th and 28th, but vegetation was not materially damaged. In Texas light frost occurred in a number of widely separated localities on the 28th and 29th without, however, causing any injury.

A cloudburst was reported on the afternoon of the 9th 2 miles west of Vaughn, N. Mex., in the upper watershed of the Rio Pecos. At Vaughn itself the precipitation on that day was only 0.17 inch.

A damaging wind and hailstorm occurred at Palestine, Tex., on the 22d. The wind attained a velocity of 48 miles per hour, which was the maximum wind velocity reported from regular Weather Bureau stations. The damage to buildings, trees, and other property was heavy.

A project is under way to levee the Rio Grande in drainage District No. 1 of Hidalgo County, Tex. A levee and drainage bond issue for $176,000 was voted by that county in 1908, but for various reasons the Attorney General of the State of Texas withheld his approval. It has been reported that since the August flood of the lower Rio Grande the opposition to the project has disappeared and it is understood that the work of leveeing will begin at an early date.

Levee work is also contemplated on the Brazos River in Washington and Burleson counties under the levee and drainage district act of the thirty-first legislature. This is expected to reclaim about 80,000 acres of land.

An irrigation project is contemplated near Bay City, Matagorda County, Tex., and precipitation data in connection therewith have been furnished the supervising engineer by the central office of the Texas section.

The following notes are reprints from the Reclamation Record for October, 1909:

New Mexico, Carlsbad Project (completed): The enlargement of the Black River cut-off ditch and the work of operating and maintaining the canal system have been continued during the month. The supply of water in Pecos River has been ample for irrigation purposes on the project and for three days 2,000 second-feet of water were allowed to pass over the spillway at Avalon Dam.

New Mexico, Hondo Project (completed): The total rainfall during the year to the end of September has amounted to 6.84 inches. The amount of water available for irrigation during the month has been insufficient to supply the growing crops and orchards, but partial irrigation has been of some value.

New Mexico, Leasburg Project (completed): During the month of September the flow of the Rio Grande at the Leasburg diversion has varied from 1,000 to 10,000 second-feet, giving an ample supply of water for irrigation on the project. The survey of farm units has been continued.

New Mexico-Texas, Rio Grande Project (preliminary work): The survey of small tracts within the reservoir site has been continued and is nearly completed. Topographic surveys in El Paso Valley have been continued and a total area of about 23,000 acres has been mapped.

The following report of the damage caused to the Zuni Dam, and of the loss of the Bluewater Dam on the 6th of September, 1909, is furnished by Mr. C. E. Linney, Section Director, Santa Fe, N. Mex.

The recent partial loss of the massive stone and concrete dam at the reservoir of the Bluewater Development Company, 12 miles southwest of the village of Bluewater, Valencia County, N. Mex., and the damage to the spillway and adjoining lands of the Zuni Reservoir, at Blackrock, McKinley County, N. Mex., on the 6th of September, 1909, were no doubt due to the frequent heavy rains over the Zuni Mountains during July and August, and to sudden and heavy downpours on, or rather within, the drainage basins of these reservoirs on the 4th and 5th days of September.

The dam first mentioned is a stone and concrete structure 386 feet long placed in the canyon at the junction of the Azul and Bluewater creeks, 12 miles southwest of the village of Bluewater, and over 1,000 feet higher than the village. It is spoken of as an ideal site, having been first selected by the U. S. Geological Survey, and known then as U. S. Geological Survey Reservoir No. 33. It was later taken up by the Bluewater Development Company, which built the present dam. The total area embodied in the reservoir is 3,435 acres, with a storage capacity of 92,000 acre feet, received from the combined waters of the Cottonwood, Azul, and Bluewater creeks, which have an approximate drainage area of 240 square miles, much of which is well forested. The second dam is a dry rock, earth and concrete structure placed between the arms of two mesas on the Zuni River 4 miles northeast of the village and pueblo of Zuni. It creates a reservoir a mile square, with an average depth of 35 feet, and a capacity to irrigate about 8,000 acres of land. Its drainage area is somewhat greater than that of the Bluewater Reservoir. Within this reservoir the water stood at a depth of 90 feet at the dam, and was within 1 foot of the top of the spillway when the damage occurred.

Thus far stations are lacking in the higher altitudes of the region in which these reservoirs, or their drainage basins, are located and the amount of precipitation over the mountains is therefore purely speculation, but the following stations are adjacent to the region and no doubt point the way to much greater amounts in the higher altitudes. During August the precipitation was as follows: Manuelito, 7.55; Blackrock, 2.83; Fort Wingate, 5.40; Bluewater Reservoir,3.73; Bluewater (village), 4.09; San Rafael, 10.03 inches. To this the following amounts were added up to the 6th of September: Manuelito, 1.21; Blackrock, 1.33; Fort Wingate, 2.22; Bluewater Reservoir, 1.96 inches. At Bluewater the gage was lost in the

flood. Heavy downpours were reported to be general over the region from the 22d to the 26th of August, the 29th and 30th of August, the 1st of September and the 4th and 5th of September, with rain continuing on the 6th. These late heavy rains coming upon land that was already saturated, passed rapidly down the steep slopes into the arroyos and canyons causing an unusual volume of water which exceeded the resisting strength of the dams and they gave way.

Mr. E. Z. Ross, General Manager of the Bluewater Development Company, thus describes the break in their dam, and its cause:

Under normal conditions the water in the lake stands within six feet of the top of the dam. Any rise over that causes it to flow over the spillway.

The rainfall was unprecedented. The Bluewater project has a drainage area of more than 200 square miles, and for several days a steady rain fell over its entire area. The watchman at the dam saw the water in the lake rise rapidly on Sunday (the 5th). Monday a wave 2 feet high swept across the surface of the lake, causing an unprecedented rise. This came from the mountain side where it was raining steadily, and bore directly down on the dam. The top of the stone and cement structure was loosened. Then came the cloudburst which brought down a wall of water 5 feet high against our works, already straining under the weight of water. The flood brought down great logs, railroad ties, and other debris which beat against the walls like battering rams. The result was inevitable, and the dam broke for a distance of about 100 feet. When the dam broke the lake rushed through the 12 miles of canyon to the Bluewater Valley. It required about six hours for the flood to pass from the reservoir to the valley and with telephone connection there was ample warning of the approaching danger and no lives were lost. The canyon was swept clean. Great boulders were hurled before the flood as so much paper. When the flood reached the valley it did not spread out, as supposed, but carried by its own force, rushed out across the valley tearing a bed for itself. It was first a stream without banks, then it made banks for itself. The flood rushed on across the valley to the railroad track cutting it in two, and on to the malpais beds on the northern side of the valley, where it was checked and turned back again cutting the railroad tracks lower down. Several miles of railroad track were submerged, about 10,000 feet of track were washed away, and the roadbed for several miles on either side was softened so as to be unsafe.

There was no loss of life and very little loss of live stock. The part of the valley swept by the flood was mostly waste land before the flood occurred. It had been the dumping ground of previous floods and was strewn with boulders and was unfit for farming. That is, the worst of the flood went over raw land and the cultivated area escaped damage almost entirely. The farmers of the Bluewater Valley shipped vegetables out both east and west on the first trains to pass (night of the 9th) after the flood, showing that their crops were not totally destroyed, as first reported.

Estimates as to the damage done to the valley and to the irrigations works of the company vary widely, but it is probable that, exclusive of the loss and damage to the railroad property, $50,000 will not fully cover the loss. It is asserted that the company will shortly begin the restoration of the dam, and it is hoped that this can be accomplished in time for next season's work.

At Zuni, or Blackrock, since it is at the latter place the reservoir is located, 4 miles northeast of Zuni, the following is given by the Government engineers, in regard to the damage done:

The reservoir had been gradually filling for the past six weeks, and on Monday, September 6, the water was within a foot of the spillway level. Everything was all right thus far. In the evening it was noticed that water was coming through the west side of the mesa south of the dam. Before long the floor of the spillway had been undermined and gradually settled 5 to 7 feet. The water had gotten between the lava rock and the sand bed on which it rests, and this underground flow has continued since, lowering the water in the reservoir 11 feet up to yesterday morning (8th). Mr. Ritter, the engineer in charge, expects the flow to stop before reaching the 30 foot level, another drop of 6 feet. The water flowing under the mesa, empties into the old river bed below the dam, and this has been ample to carry it off. No damage whatever was done to the village of Zuni or to anything below the dam. The dam, gate tower, and tunnel are intact, but the entire ground between the mess house and the dam has sunk, clear across the mesa, from east to west, and the water is flowing out under the south quarry.

Supt. Wm. J. Oliver, adds the following, in a letter to this office:

It was not heavy rains that caused the break in the spillway of the dam. The dam proper is uninjured. The cause of the break was that there was a strata of sand rock under part of the spillway and the adjoining section of land. The water washed out this strata of sand rock, causing the spillway and adjoining land to fall some distance. The water did not escape rapidly and no damage to property has been noticed. During the rainy season there has been greater precipitation in the vicinity than at the station, and there have been numerous cloudbursts which found their way into the reservoir. From present indications no permanent injury will be sustained.

The postmaster at Ramah, a village about 20 miles east-northeast of Blackrock, in the mountains and near the headwaters of the Zuni River, gives the following report:

The rainfall here at Ramah has been very heavy nearly every day for eight weeks, or more, but no floods have occurred. There have been, however, cloudbursts in the surrounding country, and on Sunday and Monday (5th and 6th) before the Bluewater Dam went out very heavy rains fell on the Zuni Mountains. The Zuni Dam did not go out, the water having never gone over the spillway. Faulty foundation was the cause, as the dam was built in malpais country. The water, after the reservoir filled, having sufficient pressure to find its way under and around the dam, washed out the sand and caused a bad settlement of the spillway, and of the whole mesa on the south of the dam.

The postmaster at Guam says:

It has rained about every day for the last thirty days in this vicinity, and on several occasions the rainfall increased to the proportions of cloudburst.

The postmaster at Gallup says:

Storms have been almost continuous since the early part of July. Storms, not general, but local, extending from a point near Fort Defiance, Ariz., to the Zuni Mountains, in fact following the pine forests. Electrical storms were more noticeable then ever before. Three cloudbursts have occurred in the above rainy district within the past month and more water has been running in the channels of streams than was ever known before.

Capt. C. C. Whitcomb, surgeon in charge, Fort Wingate, N. Mex., says: "At the fort there have been no exceedingly heavy rains of short duration." But it is noticed that just prior to the loss of the Bluewater Dam 1.20 inches occurred on the 4th and 0.50 inch on the 5th, after a month in which 5.40 inches of precipitation occurred, and of which 1.30 inches fell in three hours on the 25th of August, and 0.50 inch in two hours on the following day, indicating heavy local rains.

Mr. W. A. L. Tarr, cooperative observer at Manuelito says:

Lightning and sudden hard rains occurred on the 1st, 4th, and 5th. Cloudbursts swept down on the 4th and the Rio Puerco and all ditches were two-thirds full to overflowing. Again on the 7th to the northeast a great deal of rain occurred. Considerable vegetation has been washed out of the canyons by the rains.

In conclusion it seems fairly well established that heavy downpours (so-called cloudbursts) did occur over the Zuni Mountain country quite generally on the 29th and 30th of August and on the 1st, 4th, and 5th of September, probably reaching a climax on the latter days. This heavy fall, dashed upon ground already filled to saturation by the heavy rains of August, rushed quickly down the steep slopes into the arroyos and canyons causing a great volume of water, with flood waves and resulting damage. However, it is also apparent, if no cloudbursts did occur in the higher altitudes, as reported by numerous correspondents, that a fall approaching that which did occur at Fort Wingate (the station nearest to the headwaters of these streams) coming upon an expanse of foothills and mountains already saturated by long continued and heavy rains would be abundantly able to produce a volume of water sufficiently large to cause flood waves mentioned and to do the damage[1] which has been reported, especially where the reservoirs were filled almost, or quite to storage capacity prior to the last onslaught.

[1] It appears from the above reports that the Zuni Dam was sufficiently strong to withstand the floods and cloudbursts that attacked it; but that the natural foundations of the reservoir basin gave way under the great pressure of the water. This weak sandstone stratum would have developed independently of cloudbursts, as soon as the water in the reservoir rose to the reported extreme height. Evidently it is necessary to have as complete knowledge as possible of the geological nature of the floors as well as of the dam anchorage of our great irrigation reservoirs, if such accidents are to be avoided.—*C. A. jr.*

TABLE 1.—*Climatological data for September, 1909. District No. 8, Texas and Rio Grande Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Amethyst (near)	Mineral	8,730	1																	Don C. La Font.
Blanca	Costilla	8,403	...	55.0		84	2†	23	23	45	0.76		0.31	T.	5	17	12	1	sw.	L. C. Audrain.
Cumbres	Conejos	10,015	3																	Venita A. Good.
Garnett	Costilla	7,576	16	54.7	+ 1.0	78	1†	30	14†	45	1.62	+ 0.82	0.61	3.0	6	17	8	5	sw.	Chas. Speiser.
Hermit	Hinsdale	9,843	...								2.25		0.88	1.5	7					C. C. Mason.
La Veta Pass	Costilla	9,000	...								3.07		1.22	2.0	7	11	14	5	w.	Norvin R. Lively.
Manassa	Conejos	7,700	3	54.2		77	2	26	14†	44	0.93		0.50	0.0	2	16	8	5	sw.	J. B. Chapman.
Platoro	do	9,675	2								2.08		0.60	4.0	8	23	1	6		Walter R. Hook.
Saguache	Saguache	7,740	17																	Eugene Williams.
San Luis	Costilla	7,794	18	55.0	− 0.5	78	2	24	23	45	1.18	+ 0.01	0.37	0.0	9	19	9	2	sw.	P. B. Albright.
Wagon Wheel Gap	Mineral	8,434	10																	Ellwood Bergey.
New Mexico.																				
Agricultural College	Dona Ana	3,863	43	71.4	− 1.6	95	2†	40	29	47	0.92	− 0.53	0.51	0.0	5	19	11	0		N. M. Agric. College.
Alamogordo (near)	Otero	4,338	9	70.3		97	1	41	27	41	1.14		0.82	0.0	2	18	12	0	w.	Jas. C. Dunn.
Alamogordo	do	4,320	...								1.69		0.77	0.0	4					Agent E. P. & S. W. R. R.
Albuquerque	Bernalillo	5,200	32	67.1[b]	− 1.3	87[b]	30	44[b]	28	35[b]	0.52	− 0.36	0.47	0.0	2				sw.	University of N. M.
Amizett	Taos	9,018	...								2.84		0.95	0.0	10	15	11	4	w.	Geo. W. Oates.
Ancho	Lincoln	6,112	...								0.70		0.30	0.0	4	20	7	3	sw.	Agent E. P. & S. W. R. R.
Aspen Grove Ranch	Rio Arriba	9,000	...								1.87		0.60	0.0	5	25	3	2		Junius D. Maupin.
Bateman Ranch	do	8,900	...								0.22		0.22	0.0	4	16	12	2	w.	John W. Bateman.
Bluewater	Valencia	6,732	8																	Bluewater Developm't Co
Bluewater Reservoir	do	9,000	...								1.96		0.91	0.0	3	24	4	2		Do.
Boas	Chaves	4,154	...	67.6		93	21	36	27†	49	0.27		0.27	0.0	1	23	7	0	s.	D. C. Savage.
Capitan	Lincoln	6,348	...								2.49		1.63	0.0	7	17	11	2		Agent E. P. & S. W. R. R.
Carlsbad	Eddy	3,120	15	71.8	− 2.0	95	21	39	29	52	1.00	− 0.35	0.43	0.0	5	16	12	2	se.	U. S. Reclamation Serv.
Carrizozo (1)	Lincoln	5,429	2	65.4		90	3	37	28	46	0.26		0.13	0.0	4	19	11	0	se.	A. H. Harvey.
Carrizozo (2)	do	5,438	...								0.23		0.15	0.0	5	24	6	0		Agent E. P. & S. W. R. R.
Chama	Rio Arriba	7,851	8	55.0	− 2.7	79	30	26	22	43	1.83	− 0.14	0.53	0.0	6	19	11	0	sw.	Frank C. Johnson.
Cloudcroft (1)	Otero	8,650	7																	M. P. Coakly.
Cloudcroft (2)	do	8,650	...					29	28	...	2.77		0.60	0.0	9	22	8	0	w.	Agent E. P. & S. W. R. R.
Corona	Lincoln	6,666	...								1.63		0.52	0.0	5	19	4	7	n.	Do.
Coyote	do	5,800	...								0.34		0.22	0.0	2	17	6	7	sw.	Do.
Cundiyo	Santa Fe	6,889	...								0.84		0.23	0.0	7	19	6	5	w.	Teofilo Vijil.
Demonstration Farm	San Miguel	6,800	1								3.25		1.62	0.0	5					Erb and Westerman.
Duran (1)	Torrance	6,272	1	61.4		86	2	30	27	46	0.50		0.30	0.0	2	18	11	1	w.	W. H. Birkhead.
Duran (2)	do	6,272	...								0.50		0.30	0.0	2	17	13	0		Agent E. P. & S. W. R. R.
Edison Mine	Taos	10,600	...																	Frank L. Paxton.
Elk (near)	Chaves		10	61.9[m]	− 3.0	83[a]	30	36[i]	27	39[a]	1.13	− 1.71	0.78	0.0	6	19	11	0	e.	Boyd Williams.
Escondido	Otero	4,014	...								1.71		0.48	0.0	3	22	7	1	e.	Agent E. P. & S. W. R. R.
Española	Rio Arriba	5,590	13	62.6	0.0	89	3	32	23	45	2.31	+ 1.07	1.30	0.0	7	20	4	6	n.	Mrs. E. F. McBride.
Estancia	Torrance	6,140	4	64.2		92	7	30	30	55	1.25		0.41	0.0	6	19	9	2	e.	Agent N. M. Cent. R. R.
Fort Stanton	Lincoln	6,231	30	60.1	− 1.2	87	2	27	28	51	0.59	− 1.41	0.35	0.0	3	14	13	3	se.	U. S. Sanitarium.
Fort Sumner	Guadalupe	3,960	7	69.0		92	1†	36	27	50	0.48		0.16	0.0	4	30	0	0	sw.	F. A. Manzonares.
Gallinas	Lincoln	6,635	...								0.56		0.47	0.0	2	27	3	0	w.	Agent E. P. & S. W. R. R.
Gallinas Planting Stat'n	San Miguel	7,500	3	56.7		81	30	30	23	42	2.86		1.65	0.0	5	18	11	1	nw.	U. S. Forest Service.
Harvey's Upper Ranch	do	9,400	...								3.04		1.52	0.0	5	19	7	4	se.	Simon B. Warner.
Hillsboro	Sierra	5,224	10	68.0[e]	− 0.6	90[b]	2†	41	26	42[b]	1.09	− 1.19	0.55	0.0	4	25	5	0	w.	J. M. Webster.
Hodges	Taos	8,484	...								1.94		1.22	0.0	3	21	4	5	nw.	Ralph W. Johnson.
Hondo Reservoir	Chaves	3,904	1	68.8		96	11	37	28	49	0.30		0.25	0.0	3	24	5	1	se.	U. S. Reclamation Serv.
Hope	Eddy		3																	N. L. Johnson.
Hopewell	Rio Arriba	9,500	...	47.9		72	3	22	23	39	2.42		1.47	1.0	9	7	18	5	sw.	John T. Blanton.
Laguna	Valencia	5,840	5	63.0		90	3	35	23	43	1.40		1.25	0.0	3	20	0	10	w.	Gus Weiss.
Lagunita	Guadalupe	4,500	5	65.4		92	2	36	23	50	0.56		0.23	0.0	5	20	7	3	s.	P. A. Turnbull.
La Huerta	Eddy	3,111	1								1.07		0.31	0.0	5	23	5	2	se.	D. Barclay Sutherland.
Lake Valley	Sierra	5,415	5								1.02		0.50	0.0	6	12	18	0	sw.	Wm. P. Keil.
Las Vegas	San Miguel	6,384	23	61.0	+ 0.1	90	3	30	27	49	3.91	+ 1.59	2.17	0.0	6	21	7	2	s.	Dr. Wm. C. Bailey.
Los Lunas (near)	Valencia	4,900	18	65.2	+ 0.1	90	2	40	23†	42	2.00	+ 0.32	0.90	0.0	3	16	13	1		Richard Pohl.
Los Tanos	Guadalupe	4,919	...								0.74		0.38	0.0	4	20	8	2		Agent E. P. & S. W. R. R.
Magdalena	Socorro	6,557	4	60.9		84	3	30	26	49	1.48		0.80	0.0	4	16	14	0	w.	Wm. Pender.
Mineral Hill	San Miguel	7,050	5								2.43		1.29	0.0	4	21	4	5	sw.	W. M. Nelson.
Monument	Eddy	3,500	4																	James M. Cook.
Mountainair	Torrance	6,547	7	62.0		90	3	34	27	43	1.90		0.72	0.0	6	24	4	2	sw.	John W. Corbett.
Newman	Otero	3,989	...								1.69		1.29	0.0	7	21	0	9		Agent E. P. & S. W. R. R.
Noria	Dona Ana	4,414	...								0.09		0.03	0.0	4	14	16	0	se.	Do.
Orogrande	Otero	4,171	...								0.08		0.06	0.0	2	13	16	1	e.	Do.
Oscuro (near)	Lincoln	5,016	...								0.47		0.35	0.0	4					Eugene F. Jones.
Oscuro (2)	do	5,016	...								0.45		0.33	0.0	4	20	10	0	s.	Agent E. P. & S. W. R. R.
Otis	Eddy	3,100	...								0.73		0.32	0.0	4	26	2	2	se.	A. M. Hove.
Otto	Santa Fe	6,200	...								2.47		1.26	0.0	6					Otto Goetz.
Pastura	Guadalupe	5,285	...								0.12		0.12	0.0	1	29	0	1		Agent E. P. & S. W. R. R.
Red River	Taos	8,650	...	50.6		79	5	22	23	45	1.00		0.30	0.0	4	20	9	1	w.	Mrs. L. R. Penn.
Rincon	Dona Ana	4,030	11	70.8	− 0.5	97	2	40	29	48	0.60	− 0.85	0.50	0.0	2	16	11	3	s.	Chas. H. Raitt.
Rio Grande Dam	Sierra	4,265	11	70.7		96	2	44	28	43	1.13	− 0.57	0.93	0.0	4	20	5	5	sw.	U. S. Reclamation Serv.
Rosedale	Socorro	6,910	5	60.6		82	2	36	13	31	1.23		0.46	0.0	7	18	3	9	w.	W. H. Martin.
Roswell	Chaves	3,578	12	68.3	− 2.0	93	21	36	28	48	0.40	− 0.89	0.40	0.0	1	20	9	1	sw.	U. S. Weather Bureau.
San Marcial	Socorro	4,439	14	68.4	− 1.0	96	3†	41	28	38	0.80	− 0.93	0.70	0.0	2	12	13	5	sw.	Agent A. T. & S. F. R. R.
San Rafael	Valencia	6,509	6	63.4		85	1†	36	13	44	2.14	+ 0.62	0.88	0.0	4	24	4	2	sw.	Dr. C. M. Grover.
Santa Fe	Santa Fe	7,013	37	59.1	− 1.5	81	3	35	14	32	2.70	+ 1.06	1.22	0.0	7	22	6	2	ne.	Section Center.
Santa Rosa (1)	Guadalupe	4,624	10	68.1		96	2	37	28	49	0.60	− 0.72	0.19	0.0	6	16	14	0	s.	John L. Chapman.
Santa Rosa (2)	do	4,624	...								0.75		0.35	0.0	3					Agent E. P. & S. W. R. R.
Socorro	Socorro	4,600	19	68.2	− 1.0	92	20	37	28	49	1.09	− 0.87	0.65	0.0	5	25	4	1	n.	J. J. Leeson.
Stanley (near)	Santa Fe	6,317	...	58.0		88	2	25	28	49	1.51		0.55	0.0	4	24	3	3		L. J. Cartwright.
Strauss	Dona Ana	4,080	11								1.47	− 0.02	0.57	0.0	3	20	8	2	nw.	Agent Southern Pac. R. R.
Taos	Taos	6,983	12	59.0	− 2.9	83	2	32	23	43	0.90	− 0.35	0.40	0.0	5	24	6	0	sw.	Alexander Gusdorf.
Taos Canyon	do	8,959	...								2.48		1.21	0.0	7					Leocadio Martinez, jr.
Tecolote	Lincoln	6,539	...								0.53		0.15	0.0	7	16	14	0	sw.	Agent E. P. & S. W. R. R.
Three Rivers	Otero	4,559	...								0.44		0.18	0.0	4	23	5	2		Do.
Torrance	Torrance	6,433	...								0.80		0.40	0.0	4					Do.
Tres Piedras	Taos	8,076	5	56.9		82	2	27	23	48	1.10		0.90	0.0	2	25	4	1	sw.	Edwin B. Seward.
Truchos	Rio Arriba	7,935	...	53.3		78	9	19	15	46	1.45		0.40	0.0	5	13	17	0		Ignacio Cordova.
Tularosa (1)	Otero	4,436	2	69.7		96	2	42	28	39	1.22		0.63	0.0	5	12	18	0	sw.	Irby L. Fairless.
Tularosa (2)	do	4,436	...								1.02		0.56	0.0	4	24	4	2	sw.	Agent E. P. & S. W. R. R.
Vaughn	Guadalupe										1.14		0.32	0.0	6	19	6	5	w.	Do.
Winsors	San Miguel	8,200	12	53.5	+ 1.9	81	5	22	24	29	1.60	− 0.50	0.60	0.0	5	21	6	3	w.	Henry D. Winsor.
Texas.																				
Abilene	Taylor	1,738	24	75.3	+ 1.1	96	21	45	28	35	1.05	− 2.09	0.59	0.0	5	18	11	1	s.	U. S. Weather Bureau.
Albany	Shackleford	1,429	15	77.0	+ 1.5	102	10	41	28†	49	1.16	− 1.13	0.71	0.0	3	27	3	0		N. L. Bartholomew.

TABLE 1.—*Climatological data for September, 1909. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.					Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Texas—Cont'd.																				
Alvin	Brazoria	49	10	.....	.....	.....	.....	.....	.....	.....	1.43	− 3.30	0.64	0.0	3	18	9	3	ne.	F. A. Smith.
Anahuac‖	Chambers	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.72	.....	0.42	0.0	2	.....	.....	.....	.....	B. H. Collins.
Austin	Travis	630	23	76.6	− 1.9	93	10†	50	29	28	1.20	− 2.19	0.75	0.0	3	19	8	3	n.	A. Deussen.
Ballinger‖‖	Runnels	1,637	14	75.2	− 0.1	96	9	42	28	46	2.67	− 0.56	0.82	0.0	4	22	4	4	s.	E. M. Eubank.
Barstow	Ward	2,573	2	75.4	.....	96	1†	40	29	54	0.50	.....	0.50	0.0	1	29	1	0	se.	W. H. Denis.
Beaumont	Jefferson	29	12	80.6	.....	99	2†	54	30	35	0.27	− 2.51	0.27	0.0	1	26	0	4	se.	Jno. Bender.
Beeville‖‖	Bee	225	13	78.6	− 0.2	99	21	44	29	43	2.66	− 0.13	1.33	0.0	3	18	7	5	n.	L. E. Dickey.
Big Springs	Howard	2,396	7	75.8	.....	99	1	40	28	41	0.70	.....	0.70	0.0	1	22	6	2	s.	B. Reagan.
Blanco‖‖	Blanco	1,350	13	74.0	− 3.0	98	10	40	28†	35	1.35	− 2.03	1.09	0.0	2	25	4	1	s.	R. C. Crist.
Boerne	Kendall	1,412	17	74.6	− 1.6	100	22	37	27	46	1.94	− 1.17	1.10	0.0	3	8	16	6	n.	F. W. Schweppe.
Booth‖‖	Fort Bend	81	8	.....	.....	.....	.....	.....	.....	.....	0.86	.....	0.77	0.3	4	.....	.....	.....	.....	T. R. Booth.
Boquillas	Brewster	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. A. Ernst.
Bowie	Montague	1,113	9	78.1	+ 0.6	105	10	46	28	40	1.66	.....	0.72	0.0	3	20	9	1	n.	Craig Anderson.
Brazoria	Brazoria	25	20	79.1	+ 1.2	97	10	44	29	44	1.95	− 3.75	0.69	0.0	6	26	3	1	n.	Mrs. M. A. Stephens.
Brazos	Palo Pinto	801	.....	.....	.....	.....	.....	.....	.....	.....	1.43	.....	1.20	0.0	2	.....	.....	.....	.....	Robt. E. Boyett.
Brenham‖‖	Washington	350	20	79.4	+ 0.5	102	22	49	30	37	0.99	− 1.85	0.60	0.0	5	23	5	2	se.	Mrs. B. F. Sloan.
Bridgeport‖‖	Wise	754	.....	.....	.....	.....	.....	.....	.....	.....	1.40	.....	0.70	0.0	2	.....	.....	.....	.....	Thos. C. West.
Brighton	Nueces	12	13	80.4	− 0.1	96	21	49	29	34	1.00	− 2.22	1.00	0.0	1	29	1	0	se.	G. H. Ritter.
Brownsville	Cameron	38	20	79.3	+ 0.1	94	20	51	29	35	1.21	− 4.55	0.79	0.0	4	.....	.....	.....	e.	U. S. Weather Bureau.
Brownwood‖‖	Brown	1,342	19	76.3	− 0.3	101	10†	41	28†	49	1.95	− 0.70	1.25	0.0	3	22	6	2	s.	Mrs. Pearl Smith.
Cameron‖‖	Milam	.....	1	80.2	.....	105[a]	10	44	28	46[a]	0.32	.....	0.27	0.0	2	24	6	0	s.	J. E. Watts.
Carmona	Polk	.....	1	78.1	.....	102	10†	34	28	51	0.73	.....	0.50	0.0	3	24	3	3	e.	G. S. Warner.
Claytonville	Fisher	2,100	5	74.4	.....	101	9	36	28	46	1.10	.....	0.80	0.0	3	24	1	5	e.	Wm. Lanius.
Coleman[a]	Coleman	1,710	15	72.4	− 2.7	94	12†	48	28	37	2.05	.....	1.75	0.0	3	17	2	0	s.	J. H. Tucker.
Colorado	Mitchell	2,066	15	75.2	+ 0.3	102	7†	34	30	58	1.18	− 0.88	0.92	0.0	2	25	0	5	s.	R. M. Webb.
Columbia	Brazoria	34	20	77.2	− 0.3	97	2	40	28	43	1.56	− 3.69	0.76	0.0	3	22	8	0	s.	R. B. Loggins.
Columbus‖‖	Colorado	206	5	.....	.....	.....	.....	.....	.....	.....	2.36	.....	1.80	0.0	3	.....	.....	.....	.....	Mrs. Sophie Bridge.
Comstock	Valverde	.....	.....	76.6	.....	97	21	49	28	34	0.89	.....	0.85	0.0	2	26	4	0	se.	A. D. Brown.
Corpus Christi	Nueces	20	22	78.9	− 0.1	99	21	54	28	25	1.11	− 2.89	0.91	0.0	4	24	5	1	se.	U. S. Weather Bureau.
Corsicana‖‖	Navarro	445	20	79.6	+ 2.0	104	11	48	27†	41	0.32	− 3.00	0.14	0.0	3	28	0	2	ne.	E. L. Gibson.
Crockett	Houston	350	5	80.0	.....	104	1†	43	28	41	2.27	.....	1.01	0.0	5	20	10	0	s.	A. M. Bencher.
Cuero‖‖	DeWitt	177	20	81.0	+ 1.9	103	21	43	29†	49	0.49	− 1.76	0.26	0.0	2	26	1	3	n.	H. R. Forbese.
Dallas‖‖	Dallas	466	20	79.2	+ 1.9	106	10	42	28†	54	0.32	− 2.61	0.26	0.0	2	23	1	6	s.	G. A. Elsenlohr.
Danevang	Wharton	145	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. P. Hermansen.
Decatur	Wise	1,047	3	79.6	.....	107	15	47	27	55	1.50	.....	1.50	0.0	1	23	4	1	.....	Agent Ft. W. & D. C. Ry.
Del Rio	Valverde	952	3	78.0	.....	98	21	45	28	39	3.16	.....	3.07	0.0	2	24	5	1	se.	U. S. Weather Bureau.
Dialville	Cherokee	575	11	78.2	.....	103	10	44	28	34	3.05	+ 0.24	2.30	0.0	5	22	8	0	s.	J. M. B. McKnight.
Dublin‖‖	Erath	1,466	14	75.5	0.0	99	10	49	27	35	0.49	− 1.83	0.49	0.0	1	21	8	1	s.	Jno. O. Shafer.
Duval	Travis	820	20	78.4	− 1.0	98	10	52	27	32	2.90	+ 0.48	1.76	0.0	3	21	9	0	se.	J. C. Edgar.
Eagle Pass	Maverick	800	20	82.8	+ 2.8	105	21	57	27†	38	0.80	− 2.70	0.80	0.0	1	8	21	1	.....	Jos. Metcalfe.
Edna	Jackson	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.70	.....	0.70	0.0	1	.....	.....	.....	.....	E. L. Faires.
El Paso	El Paso	3,762	30	73.0	+ 0.3	94	2	50	29	37	0.60	− 0.85	0.35	0.0	4	20	9	1	e.	U. S. Weather Bureau.
Encinal	La Salle	.....	1	81.2	.....	108	20	47	30	45	0.00	.....	0.00	0.0	0	18	11	1	se.	H C Braden.
Fairland	Burnet	.....	.....	79.4	.....	106	22	45	29	48	0.13	.....	0.07	0.0	2	26	4	0	s.	R. L. Bush.
Falfurrias	Starr	.....	2	79.2	.....	106	21	43	29	47	1.12	.....	0.42	0.0	4	26	0	4	se.	W.A. Gardner.
Flatonia	Fayette	465	1	79.4	.....	101	21†	48	28†	41	0.62	.....	0.44	0.0	3	23	7	0	s.	Julius Laux.
Fort Clark ‖‖	Kinney	1,050	22	77.5	− 1.8	99	20	47	27	33	2.00	− 1.25	2.00	0.0	1	21	8	1	se.	Post Surgeon.
Fort McIntosh	Webb	460	23	83.3	+ 1.6	108	21	48	28	42	0.00	− 2.86	0.00	0.0	0	23	0	7	e.	Do.
Fort Stockton	Pecos	3,050	4	73.2	.....	96	10†	39	27	47	0.18	.....	0.18	0.0	1	17	13	0	se.	H. H. Butz.
Fort Worth	Tarrant	670	14	78.2	+ 1.5	100	10	49	28	33	2.08	− 0.87	1.43	0.0	2	24	6	0	s.	U. S. Weather Bureau.
Fredericksburg	Gillespie	1,742	20	74.8[a]	− 1.0	96[a]	10†	41[a]	28	40[a]	0.15	− 2.85	0.15	0.0	1	22	7	1	s.	Arthur Striegler.
Gainesville	Cooke	738	20	78.2	+ 1.7	104	10	42	28†	49	0.57	− 3.50	0.37	0.0	2	.....	.....	.....	.....	J. L. Hickson.
Galveston	Galveston	69	39	79.6	+ 0.2	91	1	58	28	16	2.50	− 2.91	1.16	0.0	6	21	7	2	se.	U. S. Weather Bureau.
Gatesville	Coryell	795	5	77.0	.....	100	10	41	29	49	1.20	.....	1.00	0.0	2	26	4	0	.....	John Ryan.
Georgetown‖‖	Williamson	750	14	77.8	+ 0.2	101	10	41	28†	47	2.36	− 0.73	1.30	0.0	3	23	7	0	s.	Prof. R. E. Young.
Gonzales‖‖	Gonzales	299	4	.....	.....	.....	.....	.....	.....	.....	0.30	.....	0.30	0.0	1	.....	.....	.....	.....	J. M. Johnson.
Graham	Young	1,040	5	76.5	− 1.8	100	9†	38	28	53	0.24	− 1.64	0.15	0.0	3	26	3	1	s.	C. W. Johnson.
Grandfalls	Ward	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. C. Bridwell.
Grapevine	Tarrant	670	19	79.9[b]	+ 2.0	105[b]	10	46[b]	28	42[b]	0.72	.....	0.44	0.0	2	20[b]	8[b]	0[b]	s.	W. J. Crowley.
Greenville‖‖	Hunt	550	9	79.6	.....	106	10†	46	28	44	0.35	.....	0.20	0.0	2	25	0	5	s.	J. P. Regan.
Hallettsville	Lavaca	235	18	79.0	− 0.4	98	11†	45	29	39	T.	− 2.70	T.	0.0	0	25	3	2	s.	Dr. J. E. Lay.
Haskell	Haskell	4,013	18	78.5	+ 3.0	106	10†	43	28	47	0.66	− 1.74	0.35	0.0	2	24	6	0	s.	P. D. Saunders.
Hebbronville	Duval	.....	2	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	Henry Edds.
Hempstead‖‖	Waller	254	5	.....	.....	.....	.....	.....	.....	.....	0.25	.....	0.25	0.0	1	.....	.....	.....	.....	J. H. Hancock.
Henderson	Rusk	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.94	.....	0.49	0.0	5	19	9	2	.....	M. Kangerga.
Hewitt	McLennan	664	14	.....	.....	.....	.....	.....	.....	.....	T.	− 2.71	T.	0.0	0	.....	.....	.....	.....	I. H. Earle.
Hillsboro	Hill	628	17	79.4	.....	101	1†	43	27	38	2.52	− 0.87	2.00	0.0	3	.....	.....	.....	.....	Thompson & Campbell.
Hondo	Medina	901	7	79.5	.....	102	22	48	28	39	0.26	.....	0.26	0.0	1	23	7	0	.....	H. E. Haas.
Houston‖‖	Harris	53	20	79.4	+ 1.4	101	12	48	28	32	0.48	− 4.06	0.43	0.0	3	26	4	0	s.	O. O. Ballard.
Hubbard	Hill	638	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. C. Mecklin.
Huntsville‖‖	Walker	400	21	77.1	− 0.7	98	1†	40	28	40	0.18	− 2.72	0.18	0.0	1	28	0	2	s.	W. Y. Barr.
Jewett‖‖	Leon	496	5	79.8	.....	107	1†	42	26	48	T.	.....	T.	0.0	0	19	9	2	s.	Earle Adkisson.
Junction	Kimble	1,645	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. T. Rowsey.
Kaufman	Kaufman	448	10	79.5	+ 0.7	102	10†	48	29	38	2.02	− 2.03	1.00	0.0	3	24	6	0	n.	B. J. Hubbard.
Keene	Johnson	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Industrial Academy.
Kerrville‖‖	Kerr	1,650	14	73.5	− 1.8	97	22	36	29	48	1.82	− 1.20	0.74	0.0	3	16	8	6	.....	Mrs. F. Coleman.
Knickerbocker	Tom Green	2,050	5	73.6	.....	100	10†	35	28	48	1.76	.....	1.04	0.0	4	22	6	2	e.	Jos. Tweedy.
Kopperl	Bosque	576	9	.....	.....	.....	.....	.....	.....	.....	1.69	.....	1.40	0.0	3	.....	.....	.....	.....	T. A. Johnson.
Lampasas‖‖	Lampasas	1,026	18	77.2	+ 0.8	103	10†	38	29	51	1.61	− 0.93	1.24	0.0	3	25	4	1	s.	Mrs. K. I. Webber.
La Parra	Cameron	38	7	.....	.....	.....	.....	.....	.....	.....	0.15	.....	0.15	0.0	1	.....	.....	.....	.....	Jno. G. Kenedy.
Laureles Ranch	Nueces	20	10	.....	.....	.....	.....	.....	.....	.....	0.00	− 4.43	0.00	0.0	0	.....	.....	.....	.....	Matt Cody.
Liberty‖‖	Liberty	38	5	78.1	.....	100	1	40	28†	47	0.60	− 3.34	0.60	0.0	1	22	7	1	n.	Mrs. Fannie Sneed.
Llano	Llano	1,040	18	78.2	+ 0.2	99	2†	44	28	42	2.04	+ 0.13	2.04	0.0	1	27	3	0	se.	E. W. Torrence.
Llano Grande	Hidalgo	.....	1	73.6	.....	98	1†	40	29	38	2.62	.....	0.97	0.0	3	12	15	3	s.	M. D.Wardlow.
Long Lake‖‖	Anderson	.....	4	.....	.....	.....	.....	.....	.....	.....	0.22	.....	0.22	0.0	1	.....	.....	.....	.....	Geo. Ellis
Longview‖‖	Gregg	336	20	78.4	+ 1.0	102	10	43	29†	45	1.46	− 1.43	0.91	0.0	4	25	2	3	ne.	C. A. Propst.
Lufkin	Angelina	325	2	78.6	.....	102	10	38	28	47	2.51	+ 0.29	1.83	0.0	3	25	4	1	s.	T. A. King.
Luling‖‖	Caldwell	418	20	78.4	+ 1.6	100	22	45	29†	41	1.18	− 1.81	1.02	0.0	4	23	6	1	n.	John Carter.
Marble Falls‖‖	Burnet	771	1	.....	.....	.....	.....	.....	.....	.....	0.46	.....	0.36	0.0	3	.....	.....	.....	.....	Wm. Harrison.
Marfa	Presidio	.....	1	.....	.....	.....	.....	.....	.....	.....	2.29	.....	1.40	0.0	3	.....	.....	.....	.....	R. K. Colquitt.
Marshall	Harrison	375	.....	77.8	.....	104	10	38	28†	47	0.90	.....	0.31	0.0	4	7	22	1	ne.	Lee Scott.
Mexia‖‖	Limestone	537	5	78.8	.....	104	11	44	29	46	T.	.....	T.	0.0	0	18	9	3	e.	Miss Josephine Newman.
Midland	Midland	.....	.....	.....	.....	.....	.....	46	29	.....	0.18	.....	0.10	0.0	2	18	12	0	sw.	H. J. Elder.
Mt. Blanco	Crosby	2,750	21	71.2	− 0.6	96	21	40	24†	41	0.55	− 1.69	0.51	0.0	2	21	1	8	s.	H. C. Smith.
Nacogdoches‖‖	Nacogdoches	271	10	77.6	+ 1.3	103	10	37	28	49	1.23	− 2.01	0.75	0.0	3	25	2	3	n.	Miss Mary Hofmann.
New Braunfels	Comal	720	20	77.8	+ 0.3	98	22	45	29	38	0.19	− 2.70	0.19	0.0	1	20	10	0	e.	J. Giesecke.
Palestine	Anderson	510	27	78.3	+ 3.6	99	10	49	28	31	1.55	− 1.65	1.17	0.0	4	15	9	6	ne.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for September, 1909. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.					Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Texas—Cont'd.																				
Panter	Hood	1,000	19								0.54	− 1.97	0.40	0.0	3					E. H. Snider.
Pierce	Wharton		3	75.6		96	21	42	27	41	0.21		0.15	0.0	2	11	18	1		R. B. Pointer.
Plainview	Hale	3,370	1	69.8		95	1†	39	29	47	0.37		0.22	0.0	2	22	7	1	s.	J. F. Sander.
Port Lavaca	Calhoun	20	8	80.0		98	20	46	29	43	2.90		1.85	0.0	4	21	8	1	se.	J. H. Bickford.
Ricardo	Nueces			78.3		103	21	46	29	44	0.17		0.07	0.0	4	25	5	0	s.	Lindsay Waters.
Riverside§§	Walker	169	5								1.32		0.70	0.0	2					Mrs. C. W. Higdon.
Robert Lee§§	Coke	1,850	1	75.0		98a	11	42	28	41a	1.54		0.71	0.0	3	24	5	1	se.	H. D. Pearce.
Rockland§§	Tyler	136	5								2.50		2.00	0.0	2					D. W. Bellamy.
Rossville	Atascosa	558	2	80.4		102	25	44	28	49	1.24		0.70	0.0	2	12	15	3	se.	W. F. M. Ross.
Runge	Karnes	308	14								1.19	− 1.89	1.10	0.0	2					Reiffert & Frobese.
Sabinal	Uvalde	964	5	79.2		102	21†	47	29†	41	2.17		1.77	0.0	3	11	14	5	e.	Jas. Johnston.
San Angelo	Tom Green		1																	C. W. Goff.
San Antonio	Bexar	701	24	79.0	+ 1.9	100	22	51	29	35	0.56	− 0.38	0.37	0.0	5	17	11	2	se.	U. S. Weather Bureau.
San Augustine	San Augustine			78.8		102	10†	38	29	47	0.47		0.20	0.0	5	12	16	2		F. A. Wilson.
San Juanita§	Hidalgo			82.2a		105	21	49a	29	42a	0.00		0.00	0.0	0	10	9	11	se.	J. B. McAllen.
San Marcos§§	Hayes	588	16	77.9	− 0.4	99	22	45	29	40	0.00	− 2.77	0.00	0.0	0	26	0	4	n.	Miss L. C. Ford.
San Saba	San Saba	1,712	5	75.1		100	11	36	28	47	2.45		2.30	0.0	2	27	3	0	s.	Jas. Burns.
Santa Gertrudes	Nueces		7								0.00		0.00	0.0	0					J. B. Wright, jr.
Seymour	Baylor	1,180	3	75.1		100	10†	40	28	44	2.13		2.00	0.0	2	24	5	1	s.	F. M. Deaver.
Somerville	Burleson	251						50	28		1.50		0.90	0.0	2	14	0	16	n.	W. A. Dolan.
Sonora	Sutton	2,200	6																	Mike Murphy.
Sugarland	Fort Bend	79	11	79.2		99	9†	44	29	41	0.81	− 3.08	0.73	0.0	3	23	7	0	n.	O. M. Bakke.
Taylor	Williamson	583	8	78.0		97	22	47	29	39	0.21		0.18	0.0	3	26	3	1	s.	U. S. Weather Bureau.
Temple	Bell	630	15	78.2	+ 1.1	100	1†	49	28†	35	0.00	− 2.77	0.00	0.0	0	25	1	4	s.	W. B. Tyer.
Tilden§	McMullen		3	80.4		108	21	41	29	51	1.06		0.66	0.0	2	8	10	2	se.	Wm. Kuykendall.
Uvalde	Uvalde	937	1	79.0		105	22	44	29	47	1.02		0.85	0.0	2	28	0	2	se.	F. M. Getzendaner.
Valley Junction§§	Robertson	289	4								0.60		0.30	0.0	2					T. M. Williams.
Victoria§§	Victoria	187	11	78.6	− 2.3	100	21	46	29	40	4.25	+ 1.13	2.43	0.0	4					C. C. Zirjacks.
Waco§§	McLennan	424	20	79.6	+ 0.8	102	10	44	28	39	0.38	− 2.45	0.38	0.0	1	26	0	4	s.	E. H. Hall.
Waxahachie§§	Ellis	556	13	77.6	+ 0.4	105	10†	39	28†	52	0.33	− 2.93	0.33	0.0	1	23	5	2	s.	C. D. Longserre.
Weatherford§§	Parker	864	20	77.5	+ 0.9	100	12	45	28	35	1.05	− 1.71	0.66	0.0	4	27	1	2	n.	Miss J. Stickfort.
Wharton§§	Wharton	105	7	76.9		96	9†	45	29†	35	3.21		1.23	0.0	4	23	5	2	n.	Mrs. F. M. Hughs.
Wills Point	Van Zandt	524	4	78.4		104	9†	43	28	36	0.21		0.21	0.0	1	25	3	2	s.	W. W. Gibbard.
Zapata	Zapata			80.8		108	21	45	29	46	0.05		0.05	0.0	1	13	15	2	se.	F. H. Earnest.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 8, Texas and Rio Grande Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado																																	
Amethyst (near)	Rio Grande																																
Blanca	Trinchera		.14		.04	.31	.09	T.			T.		T.	.18																		0.76
Cumbres	Conejos																																
Garnett	Rio Grande				*	.61	.25	.05					.10	.61																		1.62
Hermit	do			.28	.17	.88	.40	.02	T.	T.	T.		.40	.10											T.		T.					2.25
La Veta Pass	Trinchera			.10	1.22	.74	.25						.30	.36								.10										3.07
Manassa	Conejos		T.	T.	.43	.50	T.							T.																		0.93
Platoro	do	.02		.12	.60	.30	.35				T.	.30	.31						.08													2.08
Saguache	San Luis																																
San Luis	Culebra		.05	.18	.10	.11	.17	.05			T.	.02	.13	.37					T.													1.18
Wagon Wheel Gap	Rio Grande																																
New Mexico																																	
Agricultural College	Rio Grande				.01	.27			.51		.12																				.01		0.92
Alamogordo (near)	do						.77	.37			.02		.53																				1.69
Alamogordo (2)	do						.82	.32	T.	T.	T.		T.																				1.14
Albuquerque	do					.47							.05																				0.52
Amizett	do		.20	.12	.02	.94	.27				.14	.20	.31	.59					.05													2.84
Ancho	do					.30				.25		T.	.10																		.05		0.70
Aspen Grove Ranch	do	.40	.60	.35	.22	.30																											1.87
Bateman's Ranch	do																																
Bluewater	do																																
Bluewater Reservoir	do	T.		.63	.91	.42	T.																										1.96
Boaz	Pecos								.27																								0.27
Capitan	do			1.63	.06		.22	.15	.18			.08	.17																				2.49
Carlsbad	do							.08	.32			.17	.06	.37																			1.00
Carrizozo (1)	Rio Grande			.02	.02				.02		.02		.15																				0.23
Carrizozo (2)	do				.05		.06		.02	T.	T.		.13																				0.26
Chama	do	.38		T.	.40	.53	.29	T.		T.			.14	.09																				1.83
Cloudcroft (1)	Pecos	.58	.20	.23	.30		.32	.37			.60	.01	.16																				2.77
Cloudcroft (2)	do																																
Corona	do		.20	.25	.52		.14		.52	T.																							1.63
Coyote	Rio Grande				.22		.12																										0.34
Cundiyo	do					.04	.20		.04	.10		.03	.23	.20																			0.84
Demonstration Farm	Pecos				.22	.70	1.62			.56										.15													3.25
Duran (1)	do			T.	T.	.20	T.		T.	T.				.30																			0.50
Duran (2)	do				T.	.20	T.		T.					.30																			0.50
Edison Mine	Rio Grande																																
Elk (near)	Pecos																																
Escondido	Rio Grande					.48	.20				.03																						0.71
Espanola	do	.14			.07	1.30	T.			T.	T.	.51	.32	.16	.01																		2.31
Estancia	do			.10		.41				.18					.22				.16												.18		1.25
Fort Stanton	Pecos				.01	T.	.23	.35	T.	T.	T.	T.	T.						T.	T.													0.59
Fort Sumner	do			.10		.10						.12	.16																				0.48
Gallinas	do			.47		.09																											0.56
Gallinas Planting Stat.	do		T.	T.	*	1.63	.80			.06	.35	T.	T.	T.																			2.86
Harvey's Upper Ranch	do		.10		T.	1.52	.92			.28		.22	T.																				3.04
Hillsboro	Rio Grande				T.	.07	.55			T.	.27	.20																						1.09
Hodges	do	T.				.48	.24		T.	T.		T.	1.22																					1.94
Hondo Reservoir	Pecos						.02	T.				.03	.25																					0.30
Hope	do																																
Hopewell	Rio Grande	.01		.18	.10	1.47	.20	.01		T.	T.	.02	.27	.16					T.														2.42
Laguna	do				*	1.25					T.	.15																					1.40
Lagunita	Pecos				.08		.05		.13			.07	.23																					0.56
La Huerta	do						.13	.14	.24				.25	.31					T.															1.07
Lake Valley	Rio Grande			.02	.02	.42				.04	.50	.02																					1.02
Las Vegas	Pecos			.02	.10	2.17	1.23			.29	.10																						3.91
Los Lunas	Rio Grande					.90				.23			.87																					2.00
Los Tanos	Pecos						.38					.05	.26	.05																				0.74
Magdalena	Rio Grande		T.	.23	.80	.25					.20																			T.	T.		1.48
Mineral Hill	Pecos				1.29	.57				.52			.05																					2.43
Monument	do																																
Mountainair	Rio Grande			.72	.08	.27	.33			.44	.06																						1.90
Newman	do		.10		.01	.01	1.29	.17		.02			T.	.09																			1.69
Noria	do					.02	.01		.03		.03																							0.09
Orogrande	do				T.	T.	.06	.02				T.																						0.08
Oscura (near)	do				.02		.04					.06	.33																					0.45
Oscura (2)	do				.03	.04						.05	.35																					0.47
Otis	Pecos						T.	.04	.12				.25	.32					T.															0.73
Otto	Rio Grande				*	.32	1.26			.70			.11																					2.47
Pastura	Pecos				.12																													0.12
Red River	Rio Grande				T.	.20	.30						.20	.30																					1.00
Rincon	do					.10	T.					.50						T.																0.60
Rio Grande Dam	do			T.	.12				.03		.93	.05	T.					T.																1.13
Rosedale	do			T.	T.	.14	.46			.09	.35	.13	T.						.04												.02			1.23
Roswell	Pecos						T.	T.					.40																					0.40
San Marcial	Rio Grande					*	.10				*	.70																						0.80
San Rafael	do	.18		.38		.88	.70																											2.14
Santa Fe	do		1.22	.08	.97	.19				.12	.02	T.	.10						T.															2.70
Santa Rosa (1)	Pecos				.35	.20	.20																											0.75
Santa Rosa (2)	do			.03	.19	.19				.05		.13		.01																				0.60
Socorro	Rio Grande		.08		.65					.20		.10	.06																					1.09
Stanley	do			.20	.55	.50				.26																								1.51
Strauss	do			T.	.33	.57		T.			.57							T.													T.		1.47
Taos	do		T.	.02	.40	.15							.12	.21																				0.90
Taos Canyon	do		.06	.20	1.21	.07					T.	.13	.66	.15					T.															2.48
Tecolote	do		T.	.15	.02	.13	T.	.10	.03	T.	.01	T.	.09																					0.53
Three Rivers	do		T.	T.		.06	.17			T.	.18	.03																						0.44
Torrance	Pecos			.10	.10				.20			.40																						0.80
Tres Piedras	Rio Grande		T.	.20	.90																												1.10
Truchas	do			.30	.20	.40		T.		.15			.40																					1.45
Tularosa (1)	do				.56		.17	.06		.23																								1.02
Tularosa (2)	do				.01	.63	.21		.06	T.	.31																							1.22
Vaughn	Pecos		.32	.26	.08	.01		T.	.17			.30																						1.14
Winsors	do			.30	.40	.60		.20		.10																								1.60
Texas																																	
Abilene	Brazos				.59									.20					.12	.07	.07												1.05
Albany	do				.15									.71						.30													1.16
Alvin‖	Coast				.64										.34	.45																	1.43
Anahuac	do								.32							.42																	0.72
Austin	Colorado																.11			.75			.34										1.20
Ballinger‖	do				.40	T.									.82					.72	.73												2.67
Barstow	Pecos													.50																				0.50
Beaumont‖	Neches																											.27					0.27
Beeville‖	Coast				.13								T.	T.	1.20		1.33																2.66

TABLE 2.—*Daily precipitation for September, 1909. District No. 8*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Cont'd.																																	
Big Springs	Colorado												T.						T.	T.	.70												0.70
Blanco‖	Guadalupe																	1.00			.26												1.35
Boerne	San Antonio															.76			1.10				.08										1.94
Booth‖	Brazos				.02										.03	.77	.04																0.86
Boquillas	Rio Grande																																
Bowie	Trinity					.57								.37								.72											1.66
Brazoria	Brazos	T.		T.	.69	.52	T.	T.		T.	.08			.01	.28	.37					T.												1.95
Brazos‖	do							1.20							.23																		1.43
Brenham‖	do		.01	T.		.20	.06								T.	.12								.60									0.99
Bridgeport‖	Trinity		.70																				.70										1.40
Brighton	Coast			T.					T.						T.			1.00															1.00
Brownsville	Rio Grande			.09										.01	.79		T.	.32															1.21
Brownwood‖	Colorado	.60					.10								1.25					T.													1.95
Cameron‖	Brazos				T.						.05						.27																0.32
Carmona	Neches											T.				.01	.50				T.			.22									0.73
Claytonville	Brazos													.15					T.	.15	.80												1.10
Coleman	Colorado																																
Colorado	do													.26								.92											1.18
Columbia	Brazos				.50	.76							T.		T.		.30				T.												1.56
Columbus‖	Colorado		T.	T.		1.80											.22	.34															2.36
Comstock	Rio Grande														.85			.04															0.89
Corpus Christi	Coast			T.	.06				.05				.09	T.	.91																		1.11
Corsicana‖	Trinity	.08													.14		.10																0.32
Crockett	do	T.	T.		T.									1.01		.36	.67				.16			.07									2.27
Cuero‖	Guadalupe															.26		.23															0.49
Dallas‖	Trinity						.26								.06																		0.32
Danevang	Coast																																
Decatur	Trinity					T.								T.								1.50											1.50
Del Rio	Rio Grande														3.07			.09															3.16
Dialville	Neches	.05														.45	2.30				.10		.15										3.05
Dublin‖	Brazos													.49																			0.49
Duval	Colorado				T.									T.			.76			.38			1.76										2.90
Eagle Pass	Rio Grande														.80																		6.80
Edna	Lavaca				T.	T.			T.					T.	.70						T.												0.70
El Paso	Rio Grande		T.		T.	.30	.05	.13		T.	.12	T.																					0.60
Encinal	Nueces																																0.00
Fairland	Colorado				T.	T.								T.	.07	T.	T.			.06													0.13
Falfurrias	Coast		.15	.25													.42	.30															1.12
Flatonia	Guadalupe				.13									T.	.05			T.						.44									0.62
Fort Clark‖	Rio Grande														2.00																		2.00
Fort McIntosh	do																																0.00
Fort Stockton	Pecos																		.18	T.													0.18
Fort Worth	Trinity					1.43									.65						T.												2.08
Fredericksburg	Colorado														.15		T.																0.15
Gainesville	Trinity					.20									.37																		0.57
Galveston	Coast								.24		.01				.24	1.08	.84	.09															2.50
Gatesville	Brazos														1.00							.20											1.20
Georgetown‖	do														.33							.73		1.30								2.36
Gonzales‖	Guadalupe																							.30									0.30
Graham	Brazos					.02								.07	.15																		0.24
Grandfalls	Pecos																																
Grapevine	Trinity					T.									.28	.44																	0.72
Greenville‖	Sabine	.15											T.		.20																		0.35
Hallettsville	Lavaca				T.	T.									T.		T.																T.
Haskell	Brazos													.35	T.					.31													0.66
Hebbronville	Coast																																0.00
Hempstead‖	Brazos					.25								T.																			0.25
Henderson	Neches	.03				T.			.49				.25			.07					.10												0.94
Hewitt	Brazos														T.						T.												T.
Hillsboro	do	.11												2.00		.41																	2.52
Hondo	Nueces															T.	.26																0.26
Houston	Coast					T.			T.					T.	.43	.04	T.							.01									0.48
Hubbard	Trinity																																
Huntsville‖	do			T.										T.		T.	.18																0.18
Jewett‖	do		T.		T.	T.																											T.
Junction	Colorado																																
Kaufman	Trinity	1.00				T.	.60								.42																		2.02
Keene	Brazos																																
Kerrville‖	Guadalupe														.73			.35			.74												1.82
Knickerbocker	Colorado	T.				T.							.03	.27					T.	.42	1.04												1.76
Kopperl‖	Brazos				.04										1.40	T.						.25											1.69
Lampasas‖	do						.15								1.24							.22											1.61
La Parra	Coast				.15																												0.15
Laureles Ranch	do																																0.00
Liberty‖	Trinity				T.	.60									T.	T.	T.																0.60
Llano	Colorado					T.									2.04																		2.04
Llano Grande	Rio Grande			.25											.80		.97																2.02
Long Lake‖	Trinity	.22																															0.22
Longview‖	Sabine	.91											.15	.25								.15											1.46
Lufkin	Neches	.36												T.	T.	.32	1.83																2.51
Luling‖	Guadalupe											.12				.03		.01						1.02									1.18
Marble Falls‖	Colorado														.04			.36			.06												0.46
Marfa	Rio Grande							.30					.50						1.40															2.20
Marshall	Sabine		.27																		.31	.13		.19									0.90
Mexia‖	Brazos	T.																															T.
Midland	Colorado																	.08		.10													0.18
Mount Blanco	Brazos													.51					T.	.04													0.55
Nacogdoches‖	Neches	.75												T.		.27	.21					T.		T.									1.23
New Braunfels	Guadalupe													T.						.19													0.19
Palestine	Trinity	.01				T.								.15		1.17	T.		.22														1.55
Panter	Brazos													.40			.10					.04											0.54
Pierce	Colorado				.06												.15																0.21
Plainview	Brazos					.15								.22					T.	T.													0.37
Port Lavaca	Coast						T.						T.	.41	.34	.30	1.85																2.90
Ricardo	do			.07	.04				T.				T.	.02			.04																0.17
Riverside‖	Trinity															.70	.62					T.		T.									1.32
Robert Lee‖	Colorado													.71						.13	.70												1.54
Rockland‖	Neches		.50													2.00																	2.50
Rossville	Nueces													.54		T.						.70											1.24
Runge	San Antonio		1.10		.09																												1.19
Sabinal	Nueces														1.77			.10					.30										2.17
San Angelo	Colorado																																
San Augustine	Neches	.10		T.	.09				T.				T.			.05					.03	.20											0.47
San Antonio	San Antonio		.02										.05	.02	T.		.37			T.			.09										0.56

TABLE 2.—*Daily precipitation for September, 1909. District No. 8*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Cont'd.																																	
San Juanita	Coast																																0.00
San Marcos	Guadalupe																																0.00
San Saba	Colorado					.15									2.30		T.																2.45
Santa Gertrudes	Coast													2.00					.13														0.00
Seymour	Brazos				.90												.60																2.13
Somerville	do																																1.50
Sonora	Rio Grande																																....
Sugarland	Brazos	T.	T.		.03										.73	.05																	0.81
Taylor	do				.02	T.					T.				T.		T.			T.	.18		.01										0.21
Temple	Brazos																																0.00
Tilden	Nueces																																....
Uvalde	do														.17			.85															1.02
Valley Junction	Brazos																		.30						.30								0.60
Victoria	Guadalupe				1.43	1.00							.22		1.60																		4.25
Waco	Brazos														T.							.38											0.38
Waxahachie	Trinity						T.								.33																		0.33
Weatherford	do	.19					.02								.18							.66											1.05
Wharton	Colorado					.52	1.23							.25				1.21															3.21
Wills Point	Sabine	T.													.21																		0.21
Zapata	Rio Grande	.05																T.															0.05

TABLE 3.—*Maximum and minimum temperatures at selected stations September, 1909. District No. 8, Texas and Rio Grande Valley.*

Date	Colorado.				New Mexico.																Texas.							
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountainair.		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Springs.		Brownsville.		Corpus Christi.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	78	47	75	43	93	60	94	62	84	46	88	51	79	55	90	61	79	56	94	57	96	73	99	72	89	70	88	74
2...	74	46	78	39	95	62	94	62	87	50	89	54	82	54	90	59	80	54	96	58	94	71	96	70	88	73	87	78
3...	73	45	77	43	95	66	92	62	86	51	90	52	81	55	88	59	81	55	95	58	94	72	96	70	88	75	85	81
4...	70	43	71	46	94	67	93	62	81	50	76	56	77	54	88	61	72	57	91	58	93	73	96	71	90	75	88	79
5...	72	55	64	51	90	67	90	64	77	58	74	56	73	56	86	67	68	56	94	61	90	70	95	73	90	76	86	78
6...	69	48	70	45	85	64	92	68	78	56	75	56	74	56	87	64	71	56	85	63	92	73	96	71	89	76	87	78
7...	72	44	71	46	85	66	94	66	77	51	79	52	74	50	91	65	73	53	86	62	92	72	96	70	89	73	87	75
8...	73	39	72	42	91	67	93	64	77	55	82	53	77	53	89	66	75	50	83	60	92	71	97	69	90	73	85	77
9...	75	39	75	44	89	63	92	59	77	47	79	50	76	55	88	58	70	49	89	56	93	69	96	68	90	72	87	78
10...	72	44	76	38	89	63	93	63	81	44	78	49	74	49	88	59	73	53	89	53	95	72	98	66	89	72	88	74
11...	75	42	73	36	85	63	91	64	78	53	76	53	67	51	86	62	71	55	86	63	96	75	98	73	90	72	88	77
12...	68	44	65	45	86	64	83	67	77	49	76	38	73	52	87	60	68	43	85	58	94	76	95	73	92	74	86	79
13...	57	32	68	41	87	55	80	58	69	43	76	38	67	36	76	54	57	36	72	49	90	69	89	59	90	76	87	78
14...	65	30	65	38	81	57	81	50	71	34	69	38	66	42	78	47	66	35	77	43	77	59	83	55	88	75	83	73
15...	75	32	70	50	80	52	84	50	70	34	69	38	67	41	79	48	68	44	81	43	78	56	84	56	88	72	86	73
16...	73	32	75	42	79	53	82	49	70	36	72	37	66	40	77	45	70	45	80	42	82	56	86	64	89	73	86	73
17...	71	32	67	41	81	52	84	52	70	37	76	42	67	44	81	47	67	47	82	43	87	66	84	63	87	72	86	73
18...	75	33	70	42	86	56	89	65	78	49	80	45	71	46	85	63	70	45	85	52	89	67	90	67	88	73	88	75
19...	74	32	71	34	89	50	93	59	82	39	84	44	77	47	88	53	73	43	89	48	88	66	96	60	89	72	89	75
20...	75	33	72	36	90	51	93	58	82	40	71	46	79	49	90	52	74	46	88	49	84	66	86	60	94	72	95	74
21...	78	34	73	40	90	55	95	52	82	44	83	51	81	51	93	52	76	47	89	58	96	64	97	63	93	77	90	75
22...	61	30	63	29	88	55	92	58	73	48	76	40	72	48	73	51	66	43	76	46	80	61	93	61	90	78	89	78
23...	64	31	69	24	84	51	79	47	74	37	79	36	72	45	76	43	69	37	77	42	77	54	77	50	90	77	88	75
24...	73	35	76	30	84	54	79	46	74	36	81	42	74	49	76	43	72	42	80	45	81	54	84	47	87	71	82	66
25...	76	34	76	33	85	53	82	46	76	35	82	47	73	46	80	43	74	45	84	44	79	51	84	53	83	60	79	60
26...	75	36	76	35	77	51	81	45	68	31	75	38	68	43	75	41	66	44	77	43	76	51	78	50	83	60	80	59
27...	75	31	73	29	88	46	80	45	68	36	74	34	66	41	75	41	67	41	77	38	75	47	76	44	81	58	78	58
28...	75	30	69	31	79	44	82	42	78	27	78	36	70	41	79	36	71	40	86	37	80	45	83	40	81	56	77	54
29...	76	33	72	28	87	40	91	39	82	34	83	45	76	48	86	38	75	44	92	43	85	55	90	49	86	51	80	55
30...	75	34	74	30	79	49	90	48	85	43	85	49	77	52	88	45	75	49	92	57	86	53	91	50	86	59	78	60
31...																												
Mns	72.1	37.3	71.5	38.4	86.4	56.5	87.9	55.7	77.1	43.1	78.5	45.5	73.0	48.3	83.8	52.8	71.2	47.0	85.2	51.0	87.0	63.6	90.3	61.2	88.2	70.4	85.7	72.1

Date	Texas.																											
	Del Rio.		El Paso.		Fort McIntosh.		Fort Stockton.		Fort Worth.		Galveston.		Hallettsville.		Houston.		Lufkin.		Palestine.		Plainview.		San Antonio.		Seymour.		Taylor.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	94	72	92	65	96	76	94	59	92	74	91	80	97	71	98	72	99	71	94	72	95	63	93	73	95	67	95	74
2...	94	69	94	70	97	76	94	64	96	74	88	80	95	72	98	73	99	69	95	76	94	65	94	72	95	75	95	73
3...	92	74	93	67	94	76	89	65	96	75	88	81	97	71	96	73	98	72	94	74	93	62	93	72	95	74	95	71
4...	94	76	93	69	95	76	91	67	94	76	88	81	90	72	94	73	99	70	94	74	91	60	93	72	97	76	93	71
5...	94	74	87	66	96	76	89	67	95	71	88	81	90	72	92	73	99	70	92	74	87	65	93	75	91	71	93	72
6...	94	74	84	65	95	76	93	67	94	74	87	80	95	70	99	69	98	68	94	73	92	62	92	72	94	69	93	72
7...	94	72	83	65	96	75	95	65	97	76	88	79	95	68	98	70	100	68	96	73	93	67	94	71	93	75	95	70
8...	93	70	90	68	97	75	91	65	95	75	86	78	95	72	97	72	100	70	96	75	90	60	92	70	92	74	94	71
9...	94	73	88	66	95	76	93	57	97	76	88	80	95	69	100	71	99	72	97	76	92	56	94	69	97	72	95	69
10...	97	70	88	68	99	76	96	65	100	76	88	82	97	73	96	72	102	73	99	76	92	61	96	74	100	66	97	73
11...	96	72	86	66	99	78	94	64	99	79	88	81	98	72	98	74	100	72	98	77	92	61	96	75	100	72	97	73
12...	96	76	85	67	99	76	96	66	96	79	88	83	97	74	101	74	100	72	96	76	90	67	95	74	98	76	96	73
13...	96	75	79	59	99	78	86	68	95	75	88	80	98	73	96	74	101	72	94	74	80	58	93	73	92	67	94	71
14...	80	65	78	60	95	78	82	56	79	64	84	78	89	71	93	76	98	69	88	74	79	41	84	72	78	57	87	67
15...	84	62	78	60	95	72	81	47	85	63	83	74	89	69	90	67	93	69	88	67	77	48	90	66	80	56	88	66
16...	89	61	76	53	95	72	83	48	86	69	85	72	89	72	88	72	88	70	86	69	81	47	88	71	84	53	87	71
17...	88	70	79	57	97	74	85	61	89	59	84	76	91	73	90	70	89	64	86	64	80	47	92	70	87	59	90	67
18...	90	70	84	64	97	70	86	66	91	58	88	76	92	69	92	69	92	70	88	62	84	56	92	70	89	62	93	64
19...	93	70	88	57	100	72	92	61	93	68	89	77	93	69	92	68	94	63	90	66	89	57	93	70	88	65	92	70
20...	93	66	89	56	102	72	92	58	90	66	85	76	96	68	90	74	88	72	88	71	86	54	95	70	86	64	94	68
21...	98	65	89	63	108	72	96	66	94	69	88	73	97	71	95	69	95	70	92	69	95	58	100	68	97	62	96	69
22...	97	68	82	64	107	78	91	63	85	69	87	80	98	77	94	75	98	74	97	70	89	52	100	75	80	58	97	73
23...	85	66	82	60	101	80	81	45	79	59	86	71	87	71	87	68	93	66	81	62	75	43	87	68	78	50	84	63
24...	84	56	82	59	92	68	81	50	80	56	80	65	85	61	82	60	80	55	78	55	79	45	82	61	82	48	82	56
25...	83	50	83	56	89	60	80	48	80	54	79	63	82	56	81	55	78	50	78	55	80	44	82	55	82	48	81	54
26...	84	48	75	59	89	52	80	42	77	56	77	63	82	56	79	57	77	53	74	54	77	45	80	58	78	49	78	54
27...	82	50	76	55	84	54	79	39	75	53	75	60	81	53	78	53	76	50	74	50	76	42	78	54	76	44	76	49
28...	82	45	78	54	89	48	93	44	79	49	72	58	80	46	77	48	76	38	75	49	82	40	82	51	82	40	78	49
29...	87	48	87	50	92	50	90	45	87	55	77	64	84	45	83	51	86	39	82	54	86	39	86	51	88	44	86	47
30...	87	52	88	54	93	54	94	47	88	60	78	67	85	48	85	54	87	43	85	57	85	45	86	53	90	50	86	53
31...																												
Mns	90.5	65.3	84.5	61.4	96.1	70.5	88.9	57.5	89.4	66.9	84.7	74.6	91.3	66.8	91.3	67.5	92.7	64.5	89.0	66.9	86.0	53.7	90.5	67.5	88.8	61.4	90.2	65.8

Climatological Data for September, 1909.

DISTRICT No. 9, COLORADO VALLEY.

FREDERICK H. BRANDENBURG, District Editor.

GENERAL SUMMARY.

The seasonal summer rains, which, this year, were remarkably heavy and widespread, ended abruptly at the beginning of the second decade. During their continuance, the weather in September resembled that of the preceding months; there was a great excess of cloudiness, humidity, and rainfall, with low day temperatures and deficient wind movement. After their close, fair weather prevailed, except for local showers on the 24th and 25th, and the amount of sunshine and the diurnal range in temperature were greater. A cool wave, that brought frost to the higher parts of the district, occurred from the 13th to 15th. A second cool spell prevailed from the 22d to 24th, but over the greater part of the district no killing frost occurred during the month.

The mean temperature of the 136 stations reporting was 66.2°, or 0.9° below the normal. In western Wyoming the mean was 52.3°, or 2.1° above the normal; in the southern portions of the district there was a general deficiency. By subdivisions the means and departures were: western Colorado, 55.1°, −0.7°; eastern Utah, 62.9°, −0.1°; western New Mexico, 64.3°, −1.9°; Arizona, 73.5°, −1.1°. The highest monthly mean was 86.6°, at Mohawk Summit, Ariz.; the lowest, 38.2°, at Corona, Colo. The extremes were: 110° at Parker, Ariz., and 7°, at Breckenridge, Colo.

The average precipitation for the 170 stations reporting was 1.47 inches, or 0.33 inch above their normal. By watersheds the means and departures were: Green, 1.80 inches, +0.40 inch; Grand, 1.86 inch, +0.49 inch; San Juan, 2.13 inches, +1.18 inches; Little Colorado, 1.48 inches, +0.30 inch; Gila and its tributaries, 1.09 inches, +0.08 inch; lower Colorado and its tributaries, 1.37 inches, +1.01 inches. The heaviest monthly amount was 4.56 inches at Fort Wingate, N. Mex.; the least, 0.10 inch at Sentinel, Ariz. Many stations in the San Juan Basin and vicinity reported over 1 inch in twenty-four hours, usually on the 4th and 5th.

This heavy rain falling on a remarkably steep and rocky watershed, caused violent floods in the San Juan and San Miguel rivers and their tributaries. Bridges were carried away, railroad tracks buried under earthslides, growing crops were destroyed and, in places, fields were swept bare and orchards were carried away by the erosive action of the flood. In the San Juan, the water reached the highest stage since settlement of the region, and it is said that the Indians have no tradition of so great a flood. In Arizona the rainfall was not generally beyond the carrying capacity of the streams, and the previously good water supply was augmented. Without further replenishment, the water supply was considered sufficient to last until January 10.

The sunshine was generally below, and the humidity above the normal, on account of the cloudy and wet weather of the first two weeks. Both elements were near the average in the latter part of the month. The wind movement was light, especially in Arizona; this condition has obtained throughout the summer, and is generally found in very wet seasons.

NOTES.

OPENING OF GUNNISON TUNNEL.

The formal opening of Gunnison Tunnel was celebrated at the west portal of the tunnel September 23, with the President of the United States, the Secretary of the Interior, and officials of the Reclamation Service in attendance, and in the presence of many excursionists from all parts of Colorado. A program planned by a committee of local citizens, known as the Gunnison Tunnel Opening Committee, was satisfactorily carried out.

Gunnison Tunnel has a length of a little less than 6 miles and a cross-section nearly rectangular, about 10½ by 12 feet. When completed it will have a capacity of 1,300 second-feet of water, and its purpose is to convey water from Gunnison River to the valley of the Uncompahgre River for use in irrigation.

The construction of the tunnel was begun in January, 1905, and the actual opening through the tunnel was completed July 6, 1909. For a portion of its length additional excavation will still be required to complete the full section, and a considerable amount of concrete lining is yet to be placed.—*Reclamation Record, October*, 1909.

The Roosevelt Dam, located 75 miles east of Phoenix, Ariz., on the Salt River, at the junction of Tonto Creek will be completed about July 1, 1910. L. C. Hill, Supervising Engineer of the Salt River Project, Phoenix, Ariz., states that the waters of Lake Roosevelt are already 2 miles wide and 10 miles long; and that, when the dam is finished, the water impounded in the lake will be 5 miles wide and 25 miles long, a volume sufficient to irrigate 350,000 acres of land in the lower Salt River Valley, for two years, without replenishment from additional precipitation, run-off, or other source of water supply.

The Reclamation Service has abandoned the San Carlos Project, on the Gila River, in southern Gila County, and recommended the boring of artesian wells for irrigation purposes

The Laguna Dam, on the Colorado River, located 12 miles north of Yuma, Ariz., has recently been completed. This project is capable of serving water sufficient for the irrigation of some 200,000 acres of land lying along the Colorado River, on the borders of Arizona and California, which will open be for entry during October, 1909.

The Director of the Coconino Forest Experiment Station, Mr. G. A. Pearson, whose headquarters are at Flagstaff, Ariz., has been experimenting with wild grasses with a view to planting hardy grasses for range stock.

The date crop in the Salt River Valley is unusually large this year, and unless heavy rains fall in October, a full crop will be gathered. Lemons ripened during the first week in September, one month earlier than in the preceding year. The gathering of the almond crop ended early in September. It was the largest crop ever grown in the Salt River Valley. The orange crop promises a large yield.

The experiments made in the planting of Egyptian cotton in the lower Colorado and the Salt River valleys, by the Department of Agriculture, during the spring of 1909, have given good results. Picking is still in progress at Buckeye, Phoenix, Sacaton, and Yuma, Ariz.

FLOOD ON THE SAN JUAN RIVER SEPTEMBER, 1909

By W. B. FREEMAN, District Engineer, Geological Survey.

On September 5 and 6, 1909, a very heavy flood took place on the San Juan River and tributaries in southwestern Colorado and northwestern New Mexico. It is stated by the oldest residents in the vicinity of Aztec and Farmington that both the Animas and San Juan rivers reached higher stages during this flood than at any time since the country has been settled; and there was even a statement to the effect that the Indians had no memory of a time when the San Juan was so high.

The high water was caused by heavy and continuous rains at the headwaters and all along the courses of these streams. The upper San Juan itself and all its tributaries from the Piedra westward to and beyond the La Plata, from the north, were simultaneously in flood with the Canyon Largo and other large perennial tributaries from the south, all of which are capable of carrying enormous quantities of water. The Canyon Largo, for instance, has a main water course upwards of 70 miles long, and tributaries 40 or 50 miles long, so that it drains a very large area which at times is subject to an excessive run-off.

The effect of the combined flow of these streams can readily be imagined, and there was the usual resultant damage. In

Colorado, the Denver and Rio Grande Railroad sustained the greater part of the loss. Along the Animas River, between Silverton and Durango, the railroad tracks were washed out in many stretches, and at others covered with immense deposits of sediment. Traffic on this branch was suspended for about three weeks. The cost to the railroad company amounted to a great many thousand dollars, but no estimate of the loss has been obtained. The Animas River did considerable damage in the town of Durango and surrounding country.

The Pine River was in heavy flood and overflowed its banks in many places. At La Boca the river took out the approach embankment to the railroad bridge on the right bank. It has since been necessary to construct a pile span to replace this embankment. Spring Creek, which flows into the Pine River near this point, was very high, and where it follows along the railroad the latter was washed out in several places. A locomotive went into the ditch at a small railroad trestle on this creek. The Piedra and upper San Juan were also at a very high stage.

In San Juan County, New Mexico, the principal loss was sustained by the Farmington branch of the Denver and Rio Grande Railroad; by the county, through the washing out of the suspension bridge across the San Juan at Blanco; and by the farmers through the overflow of their lands by the flood waters of the Animas and San Juan rivers. The extent of the total loss in that county is not known, but it is believed to be not less than $20,000; the Blanco Bridge alone cost about $4,200.

The Flora Vista glade, which runs into the Animas River, carried a great deal of water and sediment, and did no little damage to the railroad track and the surrounding country both by washouts and the deposition of sediment. Other glades and arroyos were correspondingly high, though most of them are not in a position to do much damage.

The various streams in that section commenced to rise rapidly on Sunday, September 5, and by Sunday night they were at high stages. The maximum heights were obtained early Monday morning in the upper reaches of these streams, and about 10 o'clock on Monday night in the vicinity of Farmington.

The rainfall was quite general. As far west as Fruitland there was about seven-tenths of an inch of precipitation during the first six days of September, most of which fell on the sixth; and as far east as Chama, the rainfall amounted to 1.6 inches from September 1 to 6. At Durango, Colo., the rainfall was 3.6 inches during the above period, of which 1.64 inches fell on September 5 and 0.82 inch on September 6. The combined precipitation on September 5 and 6 at various points was as follows: Silverton, 2.50 inches; Hesperus, 2.70 inches; Mancos, 1.40 inches; Ignacio, 0.90 inch; Pagosa Springs, 1.90 inches.

The San Miguel River was in heavy flood at this same time, and the bursting of the Trout Lake Reservoir dam caused the destruction of a great deal of the property below. Several miles of railroad track were damaged or entirely washed away.

The San Juan River, at Arboles, Colo., above the most important tributaries, was at a very high stage and probably reached its maximum on Sunday night. At Blanco, N. Mex., above the Canyon Largo, the U. S Geological Survey and Territorial gage read 10 feet on Sunday evening, and at 6 a. m. Monday, September 6, when the county suspension bridge was washed out, the maximum gage height was about 11 feet. The maximum discharge there was not less than 15,000 second-feet. At Bloomfield, 12 miles below the mouth of the Canyon Largo, the river had a flood cross-section of 1,800 square feet and a maximum discharge estimated from 18,000 to 20,000 second-feet. The river overflowed the bottom lands all along its course, and in many places the course of the channel was entirely changed. At one place part of an orchard was washed into the river, and at another a house was carried away when the bank caved in. At the county bridge at Farmington, below the mouth of the Animas, the river reached a maximum height late on Monday evening. The gage height was in the neighborhood of 12.3 on the old U. S. Geological Survey gage, cross-sectional area 3,200 square feet, and the estimated discharge not less than 35,000 second-feet. At this place the river overflowed the right bank for a distance of about 100 yards beyond the end of the bridge, but the latter was not damaged in any way.

The Animas River, at Durango, reached a maximum height of 8.50 at the Power Company's gage between 4 and 6 a. m., Monday, September 6. The maximum discharge was estimated to be over 10,000 second-feet. Between 6 and 7 p. m. on Monday the maximum height of 11 feet was reached on the U. S. Geological Survey and Territorial Engineers gage at Aztec, N. Mex., and between 10 and 11 p. m. the maximum gage height at the old U. S. Geological Survey gage at Farmington was 11.1 feet. At Aztec the river overflowed the right bank for a distance of 800 feet beyond the end of the suspension bridge, the water being from five-tenths to 2 feet in depth; and at Farmington the river was over its right bank for a distance of a quarter of a mile; the fair grounds and race track there were entirely submerged.

The flood cross section at Aztec was about 3,100 square feet, and the estimated discharge was 16,000 second-feet. At Farmington the maximum discharge was probably from 18,000 to 20,000 second feet.

The La Plata River attained a maximum gage height of 7.60 feet on the U. S. Geological Survey and Territorial Engineers gage at La Plata, N. Mex., on Sunday night, September 5, and it is estimated that the maximum discharge was from 6,000 to 7,000 second-feet. The left bank was overflowed for a distance of 1,000 feet, and the cross-sectional area of the overflow was 1,300 square feet, while the cross sectional area of the main channel was only 224 square feet. It is estimated that the channel under the bridge at La Plata carried a maximum of 3,000 second-feet, while the overflow amounted to as much or more than that amount.

During this flood on the San Juan River probably over 100,000 acre-feet of flood waters went to waste and were allowed to do a great deal of damage to the surrounding country. Had these waters been properly stored in any of the numerous reservoirs contemplated in San Juan County, such as the proposed San Juan Reservoir, all of this damage could have been prevented and the waters used for the irrigation of a large acreage.

It is true that a flood of this magnitude is not likely to occur for a number of years, and it is also true that it is not necessary to store these excessive flood water for irrigation purposes. The San Juan River is a magnificent stream and its normal flow is ample for the irrigation of all the lands which it will be possible to put under cultivation for a number of years to come; however, some storage is necessary on the San Juan, as on any other river in the West. In the latter part of September of this year the flow of the San Juan River above the mouth of the Animas was only 1,100 second feet, and of the Animas River, at Aztec, 800 second-feet. These flows were considerably above the normal for that period of the year.

TABLE 1.—*Climatological data for September, 1909. District No. 9, Colorado Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																			
Daniel	Uinta	6,740	10	48.5	+ 2.1	74	27†	15	23	49	1.35	+ 0.56	0.57	T.	5	11	12	7	nw.	J. M. Van Dervort.
Dixon	Carbon																			Carey O. Morgan.
Eden	Sweetwater	6,577	...	52.4	.....	78	27†	16	23†	52	0.91	.....	0.36	0.0	5	17	7	6	w.	Eden Valley L'd & Ir. Co.
Fontenelle	Uinta	6,400	3																	C. W. Holden.
Green River	Sweetwater	6,083	4	56.0	.....	87	2	19	23	57	0.54	.....	0.31	0.0	5	15	9	6	w.	Geo. H. Maxom.
Kendall	Fremont	7,630	...																	Art. Doyle.
Pinedale	....do	7,167	3																	Forest Service.
Willow Creek Cabin	....do	7,500	1																	John L. Allen.
Colorado.																				
Ashcroft	Pitkin	9,483	8	47.4	.....	73	2†	18	22	41	2.75	.....	0.57	0.0	16	...	...	...	.....	Dan McArthur.
Breckenridge	Summit	9,536	19	44.6[a]	− 2.1	70[a]	28†	7[a]	22	50[a]	1.86	+ 0.52	0.50	4.0	10	1	20	8	se.	Mrs. J. G. Thompson.
Cascade	San Juan	8,900	3																	San Juan P. & W. Co.
Chromo	Archuleta	7,500	3	52.5	.....	80	3	20	23	58	2.32	.....	0.79	0.0	9	20	3	7	sw.	Lawrence Nolan.
Cochetopa	Saguache	9,088	...								2.33	.....	0.45	3.5	12	9	17	4	w.	Bessie McDonough.
Collbran	Mesa	6,000	16	58.0	− 1.5	79	2†	28	24	47	2.32	+ 0.97	0.79	0.0	8	18	9	3	sw.	A. A. Wood.
Columbine	Routt	8,766	...																	Jas. H. Caron.
Columbine Ranch	Delta	6,925	...																	Geo. W. Wade.
Corona	Grand	11,660	2	38.2	.....	58	2†	14	22†	28	3.58	.....	0.76	17.5	14	...	...	...	w.	U. S. Weather Bureau.
Crawford (near)	Montrose	6,600	...	58.1	.....	84	2	28	22	34	1.89	.....	0.83	0.0	8	19	8	3	.....	C. W. Roe.
Crested Butte	Gunnison	8,867	...								2.00	.....	0.93	0.0	9	10	8	12	w.	Charles L. Ross.
De Beque	Mesa	4,935	...																	C. M. Paine.
Delta	Delta	4,965	18	63.9	+ 1.4	90	2†	29	23	51	1.08	+ 0.23	0.73	0.0	4	22	3	5	.....	E. M. Getts.
Dillon	Summit	8,800	...								1.27	.....	0.40	4.2	12	3	19	8	n.	Harry T. Hamilton.
Dolores	Dolores	6,500	...	59.0	.....	82	1	32	21†	43	1.45	.....	0.48	0.0	6	13	14	3	se.	Geo. R. Simmons, jr.
Dunkley	Routt	7,400	3																	Geo. W. Dunkley.
Durango	La Plata	6,534	16	57.4	− 0.8	80	3	31	23	42	3.63	+ 1.70	2.01	0.0	8	13	13	4	nw.	U. S. Weather Bureau.
Eagle	Eagle	6,598	4	53.4	.....	80	2	18[a]	23	48[a]	1.27	.....	0.48	0.0	6	20	7	3	w.	J. M. Witteman.
Eureka	San Juan	10,000	2																	San Juan P. & W. Co.
Fruita	Mesa	4,510	10	62.2	− 1.3	86	3†	30	22†	53	1.58	+ 0.46	0.55	0.0	7	18	9	3	se.	J. B. Willsea.
Gladstone	San Juan	10,400	3																	San Juan W. & P. Co.
Glenwood Springs (near)	Garfield	5,823	11								2.06	+ 1.37	0.28	0.0	12	17	0	13	w.	E. A. O'Neil.
Grand Junction	Mesa	4,608	18	64.6	− 1.8	87	3	39	22	37	1.13	+ 0.18	0.52	0.0	6	17	10	3	e.	U. S. Weather Bureau.
Grand Lake	Grand	8,153	...								0.60	.....	0.35	T.	2	25	0	5	.....	Mrs. Belle Kauffman.
Grand Valley	Garfield	5,089	17	62.3	− 0.2	88	3	27	23	52	1.90	+ 0.47	0.88	0.0	8	15	12	3	.....	David Evans.
Gunnison	Gunnison	7,670	16	54.1	+ 2.3	86	1	19	23	45	2.17	+ 1.50	0.75	0.0	9	14	12	4	sw.	Clarence Adams.
Hayden	Routt	6,337	...																	C. W. Harkness.
Hesperus	La Plata	8,870	11								3.78	+ 2.62	1.99	0.0	8	22	4	4	.....	John S. Spear.
Horsefly	Montrose	8,700	...																	Lawrence J. Finch.
Ignacio	La Plata	6,425	...								1.21	.....	0.50	0.0	7	16	10	4	w.	Elizabeth Schalles.
Ironton	Ouray	10,000	...																	P. H. Foley.
Kremmling (near)	Grand	7,337	1	52.0	.....	78	26	20	23	50	1.06	.....	0.38	T.	10	19	3	8	.....	H. A. Howe.
Lake City	Hinsdale	8,686	4	52.0	.....	74	2	22	23	44	1.76	.....	0.60	4.0	8	11	11	8	s.	W. H. Ogle.
Lay	Routt	6,190	15	55.2	− 1.2	82	3†	18	23	51	1.68	+ 0.26	0.91	4.0	6	15	3	12	sw.	A. G. Wallihan.
Lujane	Montrose	6,620	3	62.9	.....	87	9	29	22	43	2.79	.....	0.63	0.0	9	20	2	8	sw.	T. T. Richards.
Mancos	Montezuma	6,960	10	56.4	− 1.0	78	3	26	22	40	2.38	+ 0.93	0.99	0.0	7	19	8	3	sw.	B. M Krumpanitsky.
Marble	Gunnison	7,951	...	52.6	.....	78	26	21	23	46	2.30	.....	0.56	0.0	12	18	8	4	e.	Homer Harrington.
Marshall Pass	Saguache	10,846	6								2.71	.....	1.00	8.0	7	18	6	6	w.	William D. Lillard.
Meeker	Rio Blanco	6,182	17	54.6	− 1.0	80	2†	21	22	47	1.95	+ 0.17	0.90	0.0	5	20	7	3	sw.	T. Baker.
Montrose (near)	Montrose	5,811	20	57.6	− 2.9	80	2†	26	22†	45	1.87	+ 0.92	0.83	0.0	8	3	26	1	.....	R. Butterfield.
Nast	Pitkin	7,953	...								1.12	.....	0.41	T.	6	21	4	5	w.	Arthur Hanthorn.
Pagoda	Routt	6,500	18	54.6	− 0.7	84	2	20	23	50	2.48	+ 1.05	1.10	6.0	6	21	7	2	.....	Shaw Brothers.
Pagosa Springs	Archuleta	7,108	2	53.6	.....	79	2†	20	23	52	3.10	.....	1.40	0.0	8	16	7	7	sw.	E. T. Walker.
Paonia	Delta	5,694	8	61.8	.....	85	2	34	22†	39	1.82	.....	0.72	0.0	4	12	16	2	sw.	J. M. Underwood.
Parshall	Grand		...								0.81	.....	0.52	0.0	6	...	...	...	.....	F. A. Field.
Pitkin	Gunnison	9,500	...								2.63	.....	1.05	2.0	6	17	8	5	.....	Mrs. Maggie Cammann.
Rangely	Rio Blanco	5,050	10	59.0	+ 1.3	85	2	28	24	46	1.80	+ 0.35	0.56	0.0	6	11	15	4	w.	Mrs. C. P. Hill.
Redcliff	Eagle	8,695	14																	Dorothea Greiner.
Rico	Dolores	8,824	8																	Clinton B. Smith.
River Portal	Montrose	6,570	3	57.7	.....	81	1†	28	22	47	1.67	.....	0.60	0.0	8	16	5	9	.....	J. Dill.
Sapinero	Gunnison	8,125	9	49.8	.....	75	2	21	23	42	2.67	.....	0.76	1.5	13	17	8	5	w.	W. F. Irving.
Silt	Garfield	5,441	13	59.6	− 1.7	87	3†	27	23	50	0.53	− 0.89	0.23	0.0	6	20	7	3	w.	W. S. Park.
Silverton (1)	San Juan	9,285	5	48.8	.....	71	30	22	23	43	3.34	.....	2.00	0.0	5	15	6	9	nw.	V. E. Kerr.
Silverton (2)	....do	9,400	3																	San Juan P. & W. Co.
Spruce Lodge	Grand	9,600	1								2.65	.....	0.45	11.5	11	...	...	...	.....	H. J. Wills.
Steamboat Springs	Routt	6,683	...	53.3*	.....	81[k]	27†	16	23	57[k]	2.31	.....	0.61	3.0	10	21	4	5	.....	M. Elliot Houston.
Tacoma	La Plata	7,300	3																	San Juan P. & W. Co.
Terminal Dam	....do	8,300	3																	Do.
Uncompahgre Plateau	Montrose	8,400	...																	Martin Esser.
Whitepine	Gunnison	9,500	8	45.3	.....	69	17	19	21†	41	2.75	.....	2.00	6.0	2	16	11	3	s.	C. E. Macy.
Yampa	Routt	8,000	...								1.98	.....	0.72	T.	7	8	19	3	s.	Percy A. Hughes.
Utah.																				
Aneth	San Juan	4,800	8																	
Baker	....do	7,560	...								2.40	.....	1.10	0.0	5	21	1	8	sw.	Maude A. Palmer.
Basin	Grand	9,500	...								2.32	.....	0.48	2.0	8	7	19	4	sw.	E. H. Wolf.
Castle Dale	Emery	5,500	10	59.7	+ 1.5	86	10	27	22	36	1.60	+ 0.98	0.75	0.0	4	19	10	1	.....	James Jeffs.
Dragon	Uinta		1																	H. J. Cooper.
Dyer Mountain	....do	10,000	...																	U. S. Forest Service.
Elkhorn	....do	7,000	...																	Do.
Emery	Emery	6,260	9	60.0	+ 4.5	86	1†	29	19	49	3.48	+ 2.70	1.30	0.0	5	3	11	16	sw.	H. C. Wickman.
Escalante	Garfield	5,700	9	58.2	+ 2.4	79	3	35	23†	39	2.61	+ 1.63	1.25	0.0	8	17	0	13	.....	Geo. H. Barney.
Experiment Station	Washington	2,880	5																	Joseph T. Atkin.
Fort Duchesne	Uinta	5,000	21	60.6	+ 0.0	86	2†	28	23	44	0.67	− 0.54	0.37	0.0	3	18	10	2	w.	H. Curtis.
Grayson	San Juan	5,750	5	63.0	+ 1.2	84	3†	32	22	39	1.40	− 0.75	1.25	0.0	2	18	4	8	s.	Joseph A. Lyman.
Green River	Emery	4,080	12								0.89	+ 0.14	0.37	0.0	6	22	6	2	.....	B. F. Miller.
Hite	Garfield	3,000	10	72.2	− 0.1	96	3	47	23	35	1.70	+ 0.68	0.59	0.0	6	18	11	1	.....	John P. Hite.
Kanab	Kane	4,925	16																	W. T. Dobson.
La Sal	San Juan	7,000	9	57.6	− 0.1	78	3	25	22	38	1.40	+ 0.03	0.47	0.0	7	14	13	3	.....	Gertrude W. Carpenter.
Loa	Wayne	7,000	17	52.0	− 1.1	78	2†	25	22†	37	0.75	+ 0.20	0.20	0.0	5	...	...	...	.....	Michael Hansen.
Mill Canyon	Washington	8,400	...								0.70	.....	0.40	0.0	5	...	...	...	.....	J. A. Gardner.
Moab	Grand	4,000	20	66.2	+ 0.4	92	3	32	23	51	1.17	+ 0.07	0.41	0.0	7	14	10	6	.....	Henry Crouse.
Monticello	San Juan		1																	D. B. Perkins.
Ranch	Kane	6,700	8	53.4	− 1.6	75	16†	32	13	41	3.80	+ 1.47	1.08	0.0	6	15	11	4	w.	J. W. Seaman.
St. George	Washington	2,880	28																	Jas. G. Bleak.
Scofield	Carbon	7,625	1	46.2	.....	78	1	21	29	42	3.21	.....	2.60	T.	10	18	2	10	.....	O. E. Jorgensen.
Springdale	Washington	.....	2	70.8	.....	92	24	38	6	35	1.17	.....	0.45	0.0	4	9	6	15	s.	Wm. W. Flanigan.
Strawberry Valley	Wasatch	.....	3	51.6	.....	77	2	20	22	37	1.93	.....	1.14	1.0	8	10	18	2	.....	U. S. Reclamation Service
Sunnyside	Carbon	5,280	1	.....	.....	.....	...	.....	...	...	1.92	− 0.22	0.73	0.0	6	...	...	...	.....	Henry Cullum.

TABLE 1.—*Climatological data for September, 1909. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Utah—Cont'd.																				
Teasdale	Wayne	7,000	1								1.75		1.00	0.0	5					Josiah Shurtz.
Theodore	Wasatch	5,507	4	59.0	+ 0.4	82	3	27	22	44	2.72	+ 1.80	1.69	0.0	5	1	12	4		L. Claire Winslow.
Tropic	Garfield	7,000	12	57.8	+ 0.4	82	20	30	23	44	2.45	+ 1.40	1.89	0.0	4	15	12	3	sw.	E. P. Bolton.
Vernal	Uinta	5,380	14																	Joab Collier.
Wellington	Carbon	5,540	10	55.3	− 2.7	80	2	26	23	42										Melville Branch.
New Mexico.																				
Blackrock	McKinley		2	61.6		85	3	33	13	43	1.69		0.60	0.0	7	13	16	1	w.	Wm. J. Oliver.
Bloomfield	San Juan	5,500	13	61.6[d]	− 2.6	90[d]	5	30[d]	23	48[d]	1.25	+ 0.42	1.00	0.0	3	15	11	4	sw.	Fred Le Clerc.
Cambray	Luna	4,215	11								1.25	− 0.25	0.50	0.0	3	17	0	13		Agent, Southern Pac. Ry
Cliff	Grant	4,470	11	68.2[a]	− 2.6	97[a]	2†	35[a]	27	50[a]	1.82	− 0.19	0.97	0.0	5					T. J. Clark, sr.
Columbus	Luna	4,054									0.32		0.19	0.0	2	17	2	11	sw.	Agent, E. P. & S. W. R. R.
Deming	do	4,333	33	70.2		95	3	48	14†	38	0.88	− 0.51	0.85	0.0	2	20	4	6	w.	Agent, Southern Pac. Ry.
Dulce	Rio Arriba	6,767	3	57.2[1]		82[n]	2†	29[j]	28	42[n]	0.55		0.30	0.0	2	21	8	1		W. A. Fuller.
Fort Bayard	Grant	6,152	35	66.6	+ 0.2	89	2	45	13†	37	1.55	− 0.41	0.60	0.0	4	28	2	0	nw.	U. S. A. Gen'l Hospital.
Fort Wingate	McKinley	6,997	46	58.4	− 4.6	82	2	28	13	42	4.56	+ 3.21	1.20	0.0	9	16	5	9	sw.	Medical Corps, U. S. A.
Frisco	Socorro	5,800	3	67.1		90	2	47	13†	36	2.08		0.77	0.0	5	16	13	1	sw.	John R. Milligan.
Fruitland	San Juan	4,800	17	63.8	+ 0.5	87	2†	30	23	48	0.95	+ 0.21	0.65	0.0	2	24	5	1	w.	Cyril Jas. Collyer.
Gage	Luna	4,486	3	70.0		98	1	46	30	41	0.45	− 0.74	0.25	0.0	2	11	14	5	e.	Agent, Southern Pac. Ry.
Hachita	Grant	4,504									0.26		0.16	0.0	3	20	7	3	nw.	Agent E. P. & S. W. R. R.
Hermanes	Luna	4 451									0.27		0.27	0.0	1					Do.
Lordsburg	Grant	4,245	10	71.9	− 2.4	97	2	47	29	42	0.95	− 0.64	0.40	0.0	3	13	6	11	e.	Agent Southern Pac. Ry.
Luna (near)	Socorro	7,300	5	55.7		80	2	28	14	43	2.18		1.37	0.0	5	18	22	0	w.	C. B. Martin.
Manuelito	McKinley	6,252	5	63.9		87	17	30	24	54	1.81		0.50	0.0	8	9	13	8	sw.	W. A. L. Tarr.
Mimbres	Grant	5,007	3								1.61		0.55	0.0	5	19	9	2	nw.	Charles Dennis.
Pratt	do	4,415									1.53		1.05	0.0	3	23	3	4	e.	Agent, E. P. & S. W. R. R.
Redrock	do	4,150	5								1.52		0.84	0.0	4	18	10	2		Robt. H. Woods.
Rodeo	do	4,118	1								1.20		0.70	0.0	7	19	4	7		Agent, E. P. & S. W. R. R.
Rosa	Rio Arriba	6,000	5																	B. A. Candelario.
Arizona.																				
Allaire's Ranch	Cochise	4,184	13								0.82	− 0.20	0.37	0.0	4	21	4	5	e.	Thos. Allaire.
Arizona Canal Dam	Maricopa	1,372		82.0	− 1.1	104	24	60	21	35	0.90	+ 0.23	0.48	0.0	4	16	8	6	s.	U. S. Reclamat'n Service.
Aztec	Yuma	492	9	83.2	− 4.2	104	9†	55	30	42	0.94	+ 0.67	0.64	0.0	4	22	7	1	ne.	Agent, Southern Pac. Ry.
Benson	Cochise	3,523	26	73.0	− 3.9	97	4	49	14	41	0.89	− 0.03	0.30	0.0	5	11	9	10	e.	Do
Bisbee	do	5,500	19	67.2	− 3.0	83	2†	51	14†	25	0.65	− 1.15	0.37	0.0	7	21	4	5	se.	Rev. J. G. Pritchard.
Bonita	Graham	4,916	30								1.82	+ 0.18	0.74	0.0	4	16	8	6	w.	A. Johnson & Co.
Bowie	Cochise	3,756	9	73.4	− 0.2	95	2†	50	14†	40	0.40	− 0.80	0.20	0.0	3	23	0	7		Agent, Southern Pac. Ry.
Buckeye	Maricopa	980	17	81.3	+ 1.0	105	24	50	30	49	1.73	+ 1.15	1.49	0.0	3	23	6	1	e.	H. E. Kell.
Casa Grande	Pinal	1,396	28																	Agent, Southern Pac. Ry.
Casa Grande Ruins	do	1,422	1	82.2		107	24	55	21	45	0.96		0.38	0.0	5	17	11	2	w.	F. Pinkley.
Cavecreek	Maricopa	1,520	2	77.8		102	24	51	19	45	0.75		0.35	0.0	5	17	10	3		E. H. Howard.
Chin Lee	Apache	6,090	1	62.7		88	3	31	23	46	1.63		0.82	0.0	5	21	5	4	sw.	Fr. L. Osterman, O. F. M.
Chlarsons Mill	Graham	8,000	4	59.6		82	25	42	20	32	2.67		1.20	0.0	5	14	11	5		H. R. Chlarson.
Clifton	do	3,584	17	77.4		99	2†	50	13	37	0.66	− 1.09	0.50	0.0	3	22	8	0		W. B. Cramer.
Cline	Gila	2,300	8	74.6	− 0.6	96	24	51	17†	40	1.10	+ 0.14	0.70	0.0	3	15	11	4	sw.	W. M. Clanton.
Cochise	Cochise	4,219	11	70.1	− 3.0	92	4†	42	29†	48	6.66	− 0.25	0.44	0.0	3	16	10	4	nw.	Agent Southern Pac. Ry.
Columbia	Yavapai	1,900	9	83.1	+ 2.1	104	24	66	20	29	0.49		0.25	0.0	3	19	4	7	se.	M. J. Nolan.
Congress	do	3,688	13	76.4	− 2.8	93	24	62	30	26	0.41	− 0.24	0.41	0.0	1	22	3	5	sw.	Assayer, Congress Mine.
Dos Cabezos	Cochise	5,250	1	68.2		92	2	46	22	43	1.83		0.92	0.0	3	16	13	1	e.	N. Erickson.
Douglas	do	3,930	6	74.6		100	2	48	20†	45	0.66		0.31	0.0	5	24	5	1	sw.	Dr. F. T. Wright.
Dudleyville	Pinal	2,204	18	73.8	− 3.0	96	24	49	14	40	1.14	− 0.10	0.97	0.0	5	8	16	6	s.	G. F. Cook.
Flagstaff (1)	Coconino	6,907	17	55.6	+ 0.1	76	3	32	22	42	1.74	− 0.35	1.39	T.	8	18	7	5	sw.	U. S. Weather Bureau.
Flagstaff (2)	do	7,452	4																	C. C. Moers.
Flagstaff (3) §	do	7,300	1	53.8		74	3†	28	30	40	1.45		0.58	0.0	7	16	12	8	nw.	U. S. Forest Service.
Florence	Pinal	1,504	9	81.2	+ 0.4	108	24	59	18	40	0.37		0.18	0.0	4	19	5	6	sw.	Agent, P. & E. R. R.
Fort Apache	Navajo	5,200	30	65.7	− 0.1	90	2	38	13	43	3.06	+ 1.46	1.69	0.0	5	21	8	1	ne.	Post Surgeon.
Fort Huachuca	Cochise	5,100	23	72.6	+ 1.8	94	23	49	26	40	1.65	− 0.34	0.76	0.0	6	17	2	11	se.	Do.
Fort Mohave	Mohave	604	20	81.2	− 3.6	107	9	56	29†	37	0.53	+ 0.43	0.48	0.0	2	22	6	2		A. F. Duclos.
Gilabend	Maricopa	737	18	84.2	− 1.8	108	10	58	30	43	0.12	− 0.14	0.12	0.0	1	23	5	2	e.	Agent, Southern Pac. Ry.
Globe	Gila	3,525	8	73.1		95	3	51	13†	38	1.58		1.07	0.0	4	10	19	1	nw.	Dr. B. G. Fox.
Grand Canyon (1)	Coconino	6,866	5	57.4		80	8	34	26	40	1.07		0.68	0.0	6	14	1	15	sw.	Agent, Santa Fe R. R.
Grand Canyon (2)	do	3,676	2	72.0		90	2	51	11	33	0.59		0.42	0.0	3	19	7	4	sw.	C. C. Spaulding.
Greer	Apache	9,200									2.71		1.00	0.0	8	12	11	7		Mrs. M. Butler.
Holbrook	Navajo	5,069	18	65.6	− 0.1	88	2†	39	13	43	0.31	− 0.47	0.14	0.0	3	23	5	2	sw.	Thorwald Larson.
Intake	Gila	2,230	4								1.35		0.82	0.0	4	18	6	6	w.	A. H. Neal.
Jerome	Yavapai	4,743	12	70.0	− 2.6	87	24	52	13	28	1.26	+ 0.11	1.07	0.0	3	23	6	1	s.	Dr. L. A. Hawkins.
Keams Canyon	Navajo		4	61.1		82	2	33	13	38	0.80		0.60	0.0	2	17	13	0	se.	L. R. Ballard.
Kingman	Mohave	3,326		71.3		95	24	39	30	47	1.25		0.41	0.0	5	20	7	3	sw.	G. R. Gooding.
Maricopa	Pinal	1,186	29	83.6	− 1.4	109	14	60	16†	46	0.50	+ 0.02	0.22	0.0	5	20	6	4	sw.	Agent, Southern Pac. Ry.
Mesa	Maricopa	1,244	14	82.8	+ 1.4	108	24	56	30	43	0.72	+ 0.13	0.20	0.0	5	14	11	5	se.	C. L. Diehl.
Mohawk Summit	Yuma	538	9	86.6	− 1.6	105	8	68	29	35	0.14	− 0.10	0.12	0.0	2	14	16	0	e.	Agent, Southern Pac. Ry.
Natural Bridge	Gila	4,990	20								1.62	− 0.32	0.78	0.0	5	18	9	3	sw.	D. G. Goodfellow.
Nogales	Santa Cruz	3,830	5	72.0		93	2	46	18	43	2.14		0.61	0.0	9	14	7	9		Wallace & Summerhayes.
Oracle	Pinal	4,500	19	72.2	− 1.5	88	12†	56	13	29	2.47	+ 1.04	1.04	0.0	6	22	3	5		W. H. Winters.
Paradise	Cochise	3,940	2	64.9		88	2†	39	14	43	0.91		0.40	0.0	4	8	21	1	se.	J. C. Hancock.
Parker	Yuma	345	11	82.0	− 1.3	110	9	53	29†	46	1.01	+ 0.68	0.86	0.0	2	25	2	3	n.	Dr. H. K. Marshall.
Payson	Gila	5,500	1	65.6		85	2†	41	20†	46	0.81		0.40	0.0	3	20	0	10	s.	M. McDonald.
Phœnix (1)	Maricopa	1,108	14	81.0	− 0.4	104	24	61	30	37	0.42	− 0.59	0.20	0.0	4	20	9	1	e.	U. S. Weather Bureau.
Phœnix (2)	do	1,092	18	79.2	− 1.7	105	24	54	16†	56	0.56	− 0.01	0.17	0.0	4	20	7	3	se.	G. Acuff.
Phœnix (3)	do	1,189	1	82.4		107	9	60	19†	38	0.37		0.18	0.0	3	10	19	1	w.	J. A. Ream.
Pinal Ranch	Pinal	4,520	15																	Irion & Craig.
Pinto	Apache	5,660	5								0.74		0.35	0.0	3	24	6	0	sw.	Mrs. C. F. Henning.
Prescott	Yavapai	5,320	28	62.9	− 1.7	86	24	38	13	42	2.20	+ 1.12	1.27	0.0	2	22	6	2		Dr. J. W. Flinn.
Quartzsite	Yuma	800	2	82.4		102	3†	57	14	42	0.49		0.42	0.0	2	21	9	0	sw.	W. E. Scott.
Redrock	Pinal	1,856	2	81.2		106	24	58	14†	38	2.20		0.94	0.0	5	9	18	3	sw.	W. J. Crowell.
Roosevelt	Gila	2,175	4	80.1		100	2	62	18	32	1.30		1.08	0.0	3	22	5	3		Wm. A. Schoenfeld.
Sacaton	Pinal		2	81.4		107	24	55	21	44	0.42		0.25	0.0	3	15	10	5		E. W. Hudson.
St. Johns	Apache	5,650	4	63.6		87	24	37	13	45	2.05		1.65	0.0	2	10	14	6	sw.	Alex. Shreeve.
St. Michaels	do	6,950	13	58.1	− 0.1	79	1†	31	23	42	1.87	+ 0.29	0.50	0.0	5	19	11	0	sw.	Rev. A. Weber, O. F. M.
Salome	Yuma	880	2	75.9		97	1†	47	30	48	0.28		0.15	0.0	2	21	4	5	s.	Agent, A. & C. R. R.
San Carlos	Gila	2,456	19	76.0	− 0.9	100	2†	50	14†	45	1.04	+ 0.02	0.83	0.0	2	18	8	4	sw.	F. S. Thomas,
San Simon	Cochise	3,609	24	75.6	− 1.0	98	22	52	14	37	0.42	− 0.37	0.25	0.0	3	18	7	5	sw.	Agent, Southern Pac. Ry.
Seligman	Yavapai	5,219																		C. W. Dougherty.
Sentinel	Maricopa	685	11	82.4	− 3.5	103	18†	61	19†	42	0.10	− 0.11	0.09	0.0	2	20	6	4		Agent, Southern Pac.
Showlow	Navajo	6,300	6	63.0	− 0.7	90	1	40	20	39	0.25	− 1.55	0.20	0.0	2	14	0	16	sw.	Miss Z. Hall. Ry
Silverbell	Pima	2,650	4	79.0		98	1	62	26	27	2.71		0.74	0.0	6	21	4	5	w.	Imperial Copper Co.
Supai	Coconino	3,200	2	73.0		91	3†	51	17	38	0.44		0.25	0.0	4	21	6	3		Chas. E. Coe.
Tempe	Maricopa	1,165	5	80.4		104	24	55	22	42	0.96		0.56	0.0	6	20	5	5	se.	F. H. Simmons.

TABLE 1.—*Climatological data for September, 1909. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Arizona—Cont'd.																				
Thatcher	Graham	2,800	....	73.2	.....	100	3	45	19	47	1.22	.....	0.90	0.0	4	18	10	2	se.	Prof. J. H. Larson.
Tombstone	Cochise	4,550	14	71.2	− 1.4	89	1†	52	13	34	1.81	+ 0.09	0.89	0.0	6	15	13	2	....	F. N. Walcott.
Tuba	Coconino	4,300	9	65.0	− 2.6	89	3	40	13†	46	0.56	.....	0.22	0.0	4	14	9	7	ne.	G. H. Kraus.
Tucson (1)	Pima	2,390	29	77.8	− 2.5	100	2†	52	20	43	1.25	+ 0.37	1.06	0.0	5	6	24	0	w.	University of Arizona.
Tucson (2)	.....do	2,380	1	77.0	.....	102	3†	47	29	52	0.85	.....	0.58	0.0	2	11	19	0	.....	H. G. Brown.
Upper San Pedro	Cochise	5,000	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. T. Stuart.
Vail	Pima	3,421	11	76.4	− 3.4	101	2	50	19	44	1.95	+ 1.40	1.40	0.0	5	12	15	3	sw.	Agent, Southern Pac. Ry.
Walnut Grove	Yavapai	3,649	19	.....	.....	.....	.....	.....	.....	.....	1.15	+ 0.43	0.58	0.0	3	17	10	3	.....	J. O. Carter.
Wickenburg	Maricopa	2,072	2	82.0	+ 6.0	106	24	60	21†	39	0.51	− 0.09	0.22	0.0	5	13	15	2	sw.	Agent, P. & P. R. R.
Willcox	Cochise	4,164	29	70.2	− 2.7	93	3	42	22	44	1.00	+ 0.07	0.48	0.0	3	11	3	16	sw.	Agent, Southern Pac. Ry.
Williams	Coconino	6,750	10	62.2	+ 2.0	83	24	40	22	38	0.78	.....	0.33	0.0	5	22	1	7	ne.	H. Victor.
Winslow	Navajo	4,853	1	67.2	.....	92	24	37	14	49	0.22	.....	0.20	0.0	2	19	7	4	.....	L. C. Henning.
Yarnell	Yavapai	4,700	11	.....	.....	.....	.....	.....	.....	.....	1.99	+ 0.94	1.31	0.0	3	15	4	11	s.	E. L. Bartholomew.
Yuma (1)	Yuma	141	30	82.7	− 1.2	105	9	52	30	44	0.96	+ 0.80	0.95	0.0	2	28	2	0	ne.	U. S. Weather Bureau.
Yuma (2)	.....do	150	2	79.2	.....	103	9	47	30	48	0.63	.....	0.60	0.0	2	20	10	0	sw.	E. L. Crane.
Nevada.																				
Caliente	Lincoln	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Las Vegas	Clark	2,033	2	72.8	.....	100	10	46	25	51	0.84	.....	0.65	0.0	3	.....	.....	.....	nw.	Agent, Salt Lake Route.
Logan	.....do	1,700	3	75.4	.....	99	9	44	23	49	0.58	.....	0.37	0.0	4	20	7	3	n.	Roy M. Filcher.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 9, Colorado Valley.*

Stations.	River basins.	Day of month.																														Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																
Daniel	Green	.57	.10			T.	.35					.28	.05								T.	T.	T.									1.35
Dixon	do																															
Eden	do	.28					.14		.12		.01	.36						T.														0.91
Fontenelle	do																															
Green River	do	.03		.05	T.	T.	T.	.31	.02		T.	.13																				0.54
Kendall	do																															
Pinedale	do																															
Willow Creek Cabin	do																															
Colorado.																																
Ashcroft	Grand	.03	.02	.20	.33	.57	.32	.05	.25	.03	.04	.02	.31	.45	.05					.04		.04										2.75
Breckenridge	do		.03	.10	.14	.24	.19	.09		.29			.18	.50				T.				.10	T.									1.86
Cascade	San Juan																															
Chromo	do	.15	.03	.27	.18	.79	.37	.30				.07	.16																			2.32
Cochetopa	Gunnison	.01	.21	.35	.08	.30	.15	.17	.05	.23	.06		.45	.25				.02	T.													2.33
Collbran	Grand	.07	.32	.01		.66	.34	.01	.02				.79																			2.32
Columbine	Yampa																															
Columbine Ranch	Gunnison																															
Corona	Grand	.30	.04		.12	.38	.20	.76	.20	.10	.10		.04	.74	.12			.04				T.	.44									3.58
Crawford	Gunnison		.17	.08	.04	.83	.30	.01	.19	T.	T.		.27																			1.89
Crested Butte	do	.10	.16	.18	.05	.93	.30	.05		.05		T.	.24																			2.00
De Beque	Grand																															
Delta	Gunnison	.02				.73	.18						.15																			1.08
Dillon	Grand	.20	.01	.05	.10	T.	T.	.15	.06	.02	.20	.04	T.	.40	T.	T.	T.	T.		T.	.02	T.	.02	T.				T.				1.27
Dolores	Dolores	.11	.16		.10	.41	.48					.19																				1.45
Dunkley	Yampa																															
Durango	San Juan	.50	.19	.04	.37	1.64	.82	.01				T.	.06																			3.63
Eagle	Grand																															
Eureka	San Juan																															
Fruita	Grand	.55	T.	.23	T.	.17	.23				.03	.07	.30													T.						1.58
Gladstone	San Juan																															
Glenwood Springs	Grand	.28	.19	.20	.17	.18	.28	.24	.10	.12	.07	.12	.11	T.																		2.06
Grand Junction	do	T.	T.	.10	.01	.28	.40	.06			T.	.28																				1.13
Grand Lake	do						*	.60	T.	T.				T.			T.				T.										0.60
Grand Valley	do	.03		.02	.21	.33	.88	.03	.02				.38																			1.90
Gunnison	Gunnison	.02	.03		.35	.75	.16			.09	.03			.71						.03												2.17
Hayden	Yampa																															
Hesperus	San Juan	.40	.06	.15	.04	1.99	.69	.29	T.				T.	.16																		3.78
Horsefly	Gunnison																															
Ignacio	San Juan	.06	T.	T.	.04	.50	.37	.12				.01	.11																			1.21
Ironton	Gunnison																															
Kremmling	Grand	.07		.01	.02	.12	.11	.38	.26	.01	T.		.07						.01				T.									1.06
Lake City	Gunnison		T.	.10	.05	.60	.09	.02	.14	T.	T.		.52	.24				T.														1.76
Lay	Yampa	.05	T.		T.	.91	.20	.16	.02				.34						T.			T.										1.68
Lujane	Gunnison	.12	.63	.07	.22	.57	.35	.13		T.			.25	.45																		2.79
Mancos	San Juan		.13	.29	.04	.99	.42	T.				.28	T.	.23																		2.38
Marble	Grand	.06	.13	.40	*	.56	.19	.33	.08		.23	.25	.05					.02														2.30
Marshall Pass	Gunnison				.30	1.00	.65	.04	.09				.18	.45																		2.71
Meeker	White			.05		.90	.90					.08	.02						T.													1.95
Montrose	Gunnison	.04	.20	.03	.23	.83	.16	.08	T.	T.	T.		.30																			1.87
Nast	Grand			.15		.15	.19						.18	.41						.04												1.12
Pagoda	Yampa	T.		T.	T.	1.10	.50	.04	.16	.04	T.	T.	.64																			2.48
Pagosa Springs	San Juan	.01		.18	.30	1.40	.47	.35					.30	.09			T.		T.													3.10
Paonia	Gunnison	.24	T.	T.	T.	.72	.31						.55																			1.82
Parshall	Grand			.05	.06	.06	.52	.06																								0.81
Pitkin	Gunnison			T.	1.05	.40	.20	.25					.60	.13																		2.63
Rangely	White	.14				.24	.37	.03					.56	.46																		1.80
Redcliffe	Grand																															
Rico	Dolores																															
River Portal	Gunnison	.08	.44		.60	.23	.07			.05			.15						.05													1.67
Sapinero	do	.06	.44	.04	T.	.76	.12	.37	.02	.04	.01	T.	.51	.23				T.	.03	.04												2.67
Silt	Grand			.02	.15	.03	.23	.04					.06																			0.53
Silverton (1)	San Juan	.23			.31	2.00	.50	.30																								3.34
Silverton (2)	Grand																															
Spruce Lodge	do	.12				.21	.30	.10	.11	.35	.15		.42	.45								.13	.31									2.65
Steamboat Springs	Yampa	.04	.12			.61	.55	.19	.06	.04	.09		.60									.01										2.13
Tacoma	San Juan																															
Terminal Dam	do																															
Uncompahgre Plateau	Gunnison																															
Whitepine	do					2.00	T.							.75																		2.75
Yampa	Yampa		T.		.28	.38	.32	.13	.12	.03			.72							T.												1.98
Utah.																																
Aneth	Colorado																															
Baker	do					1.10	.48	.40	.17			.25																				2.40
Basin	Grand	.19		.30		.37	.48	.01		.11		.38	.48																			2.32
Castle Dale	Green	.75		T.	T.	.25	T.		.40		.20	T.														T.						1.60
Dragon	do																															
Dyer Mountain	do																															
Elkhorn	do																															
Emery	Colorado	1.30	.40	.48	T.	1.10	.20				T.																					3.48
Escalante	do	1.25			.08	.94	.21	.65			.04	.02															.02					2.61
Fort Duchesne	Green	.37				.20	.10	T.				T.																				0.67
Grayson	San Juan						1.25		.15																							1.40
Green River	Green	.37	T.		.08	.08	.07	T.	.20			.09	T.																			0.89
Hite	Colorado	.10			.28	.51	.59	T.				.15	.07															T.				1.70
Kanab	do																															
La Sal	Grand	.04	.47	.02	.08	.22	.40					.17																				1.40
Lon	Colorado				.20	.20	.15	.10				.10																				0.75
Mill Canyon	do						*	.05																		*	.25		.40			0.70
Moab	Grand	.10	.09		.07	.35	.41	.02			T.	.13																				1.17
Monticello	do																															
Ranch	Colorado	1.08				.64	.32	.57			T.															.75	.44	T.				3.80
St. George	do																															
Scofield	Green	2.60	.06	.05	.11	.08	.09	.06		.09	.01	.06																				3.21
Springdale	Colorado						.23	.09	T.		T.	T.													T.	.40	.45					1.17
Strawberry Valley	Green	1.14			.05	.12	.36	.10	.02		T.	.13	.01																			1.93
Sunnyside	Green	.23				.25	.73	.26	.17		T.	.28																				1.92
Teasdale	Colorado	1.00	.40	.02			.10		.23																							1.75
Theodore	Green	1.69		.28		.47	T.	.25					.03															T.				2.72
Tropic	Colorado	1.89				.43	.05	T.	T.	T.		T.														T.	.08	T.				2.45
Vernal	Green																															
Wellington	do																															
New Mexico.																																
Blackrock	Little Colorado	.03		.04	.20	.60	.46			.27			.09																			1.69
Bloomfield	San Juan					1.00	.17					T.	.08	T.																		1.25

TABLE 2.—*Daily precipitation for September, 1909. District No. 9*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New Mexico—Cont'd.																																	
Cambray	Mimbres					.40					.50	.35																					1.25
Cliff	Gila					.97	.45			.08	.27	.05																					1.82
Columbus	...do				T.	.19				T.	.13	T.																					0.32
Deming	...do					.03					.85																						0.88
Dulce	San Juan				.30	.25																											0.55
Fort Bayard	Mimbres				.35	.60			T.		.35	.25																					1.55
Fort Wingate	Little Colorado	.40		.32	1.20	.59	1.20		.13	.21	.01		.50																				4.56
Frisco	Gila			T.		.77	.47			.29	.34	.25																					2.08
Fruitland	San Juan	T.			T.	.30	.65						T.																				0.95
Gage	Gila					.20					.25																						0.45
Hachita	...do			.07		.16					T.	.03																					0.26
Hermanas	...do				T.	.27				T.																							0.27
Lordsburg	...do				.40	.30				.25																							0.95
Luna	...do			.30	.04	1.37	T.	T.			.27	.20	T.						T.														2.18
Manuelito	Little Colorado	.50			.56	.20	.01	.06	.01			.50		.03																			1.81
Mimbres	Mimbres				.01	.55	.36				.26	.43																					1.61
Pratt	Gila		T.			1.05					.10	.38																					1.53
Redrock	...do				.24		.84			.34		.10																					1.52
Rodeo	...do			.15	.17	.05	.06				.13	.04	.70																					1.20
Rosa	San Juan																																
Arizona.																																	
Allaires Ranch	Sonora			.07	.36	.37					.02																T.						0.82
Arizona Canal Dam	Salt				.21	.18																				.48	.03						0.90
Aztec	Gila				.64	.07																				.03	.20						0.94
Benson	San Pedro	T.			.28	.30	.15			.13	T.															T.		.03					0.89
Bisbee	...do				.08	.37	.06				.04	.02														T.	.02	.06		T.	T.		0.65
Bonita	Mimbres				.16	.58	.34			.74		T.																					1.82
Bowie	Gila				.05	.15				.20																							0.40
Buckeye	...do					1.49	.15																			.09	T.	T.					1.73
Casa Grande	...do																																
Casa Grande Ruins	...do				.10	.28	.17																			.38		.03					0.96
Cavecreek	Verde				.15	.10	.06																			.09	.35	T.		T.			0.75
Chin Lee	San Juan				.08	.82	.59	.11			T.		.03																				1.63
Chiarsons Mills	Gila			.70	.02	.35	.40				1.20																						2.67
Clifton	...do				.10		.50				.06																						0.66
Cline	Salt			.70	.20	.20																											1.10
Cochise	Desert				.10	.12					.44																						0.66
Columbia	Agua Fria				.25			.18																		.06		T.					0.49
Congress	Hassayampa				.41	T.																				T.	T.						0.41
Dos Cabezos	Desert	.25					.66				.92																						1.83
Douglas	Sonora			.10	.31	.17				.02	T.	T.															.06	T.					0.66
Dudleyville	Gila	T.	.04	T.		.40	.57				T.	T.													T.	.03	T.	.10					1.14
Flagstaff (1)	Little Colorado	.01			.51	1.04	.06		.04	T.		.02	T.													.02	T.	.04					1.74
Flagstaff (2)	...do																																
Flagstaff (3)	...do	.40				.58	.12		.17			.07	.05																.06				1.45
Florence	Gila			.05	.18	.12																				.02							0.37
Fort Apache	Salt		.25	.12	.49	1.69	.51						T.																				3.06
Fort Huachuca	San Pedro		.05		.05	.50	.25				.10		.70																				1.65
Fort Mohave	Colorado				.48	T.	.05																										0.53
Gilabend	Gila	T.				.12																					T.						0.12
Globe	Salt			.08		.10	.33	1.07																									1.58
Grand Canyon (1)	Colorado				.22	.68	.02					.01														.06		.08					1.07
Grand Canyon (2)	...do	.11			.06		.42																										0.59
Greer	Little Colorado			.15	.25	.75	1.00		.01	.30	.15	.10																					2.71
Holbrook	...do	.12	.05	T.	.14						T.	T.	T.																				0.31
Intake	Salt			.50	.01	.82		.02																	T.								1.35
Jerome	Verde					1.07	.12																				.07						1.26
Keams Canyon	Little Colorado					.66		T.					.26													T							0.80
Kingman	Colorado				.22	.08	.40	.41																			.14	T.	T				1.25
Maricopa	Gila	.02			.16	.22																					.04	T.	.06				0.50
Mesa	Salt	T.		T.	.10	.16						.19														.07		.20					0.72
Mohawk Summit	Gila				.12																							.02					0.14
Natural Bridge	Verde					.78	.10	.38				.16																	.20				1.62
Nogales	Santa Cruz	.20	.11		.61	.22				.17	.19														T.	.12	.49	.03					2.14
Oracle	San Padre		.04		.18	1.04	.72																			.31	.18						2.47
Paradise	Desert				.11	.20				.40		.20																					0.91
Parker	Colorado				.86	T.																				T.	.15						1.01
Payson	Verde				.31	.40	.10																			T.			T.				0.81
Phoenix (1)	Salt				.20	.09					T.														T.	.03	T.	.10					0.42
Phoenix (2)	...do	T.			.10	.16	T.				T.															.17	T.	.13					0.56
Phoenix (3)	...do				.18	.12																				T.	T.	.07					0.37
Pinal Ranch	...do																																
Pinto	Little Colorado			T.	.35	.30						.09																					0.74
Prescott	Hassayampa				1.27	.93				T.																T.							2.20
Quartzsite	Colorado					.42																					.07						0.49
Redrock	Santa Cruz		.47			.94	.40																		T.	.28	.11						2.20
Roosevelt	Salt			.16	T.	1.08		.06			T.														T.	T.							1.30
Sacaton	Gila				.15	.02																						.25					0.42
St. Johns	Little Colorado	.40					1.65																										2.05
St. Michaels	...do	.10		.50	.39	.50	.38		T.		T.		T.																				1.87
Salome	Colorado			.15	T.	T.	T.																			T.	.13						0.28
San Carlos	Gila					.21	.83																					T.					1.04
San Simon	...do				.15	.25				.02																							0.42
Seligman	Verde																																
Sentinel	Gila					.09																						.01					0.10
Showlow	Little Colorado		T.		.05	.20							T.																				0.25
Silverbell	Santa Cruz	T.	T.	.61	.06	.65	.74																			.56		.09					2.71
Supai	Colorado	.10			.65		.25																		T.	T.	.04						0.44
Tempe	Salt				.12	.19						.56														.04	.01	.04					0.96
Thatcher	Gila			T.	.90	.10	.10				.12																						1.22
Tombstone	San Pedro	.32		.23	.22	.89				.09		.06																					1.81
Tuba	Little Colorado	.10				.12	.12	.22																									0.56
Tucson (1)	Santa Cruz					1.06	.05				T.														T.	.05	.05	.04					1.25
Tucson (2)	...do							.58												.27													0.85
Upper San Pedro	San Pedro																																
Vail	Santa Cruz				.15	1.40	.10				.20															.10							1.95
Walnut Grove	Hassayampa				.58	.47																				.10							1.15
Wickenburg	...do	.01			.16	.22																				.04	T.	.08					0.51
Willcox	Desert			.22			.30				.48																						1.00
Williams	Colorado	.15			.24	.33	.02																				.04						0.78
Winslow	Little Colorado		T.		T.	.02	T.		.20																								0.22
Yarnell	Hassayampa				.45		1.31																				.23						1.99
Yuma (1)	Colorado				.95	T.																				T.		.01					0.96
Yuma (2)	...do				.60																					T.		.03					0.63

TABLE 2—*Daily precipitation for September, 1909. District No. 9*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Nevada.																																	
Caliente	Colorado				.09																						•	.65	.10				0.84
Las Vegas	do	T.			.04		.37	.12																		T.	•	.05	T.				0.58
Logan	do																																

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 9, Colorado Valley.*

Date.	Wyoming.				Colorado.										Utah.										New Mexico.			
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Fort Duchesne.		Hite.		Moab.		St. George (Experiment station).		Fort Bayard.		Fort Wingate.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	68	50	79	58	72	57	84	63	86	51	76	53	.....	49	.....	.....	81	61	90	64	90	65	.....	.....	88	55	78	58
2...	72	45	87	49	78	52	83	58	79	46	80	47	.....	49	.....	.....	86	54	93	63	88	58	.....	.....	89	52	82	54
3...	72	36	86	49	80	52	87	62	76	40	75	45	.....	43	.....	.....	86	55	96	65	92	57	.....	.....	87	55	73	53
4...	73	35	79	54	68	53	86	59	71	41	77	47	.....	41	.....	.....	84	56	91	64	84	61	.....	.....	85	57	71	52
5...	66	33	72	50	63	56	65	60	70	42	63	54	.....	51	.....	.....	74	56	75	60	70	52	.....	.....	82	55	63	52
6...	67	36	64	50	69	55	67	60	67	47	63	52	.....	50	.....	.....	68	55	73	61	65	51	.....	.....	80	52	72	54
7...	66	41	73	49	71	49	70	54	70	46	59	47	.....	50	.....	.....	72	50	82	58	82	43	.....	.....	79	50	73	49
8...	69	45	74	44	71	44	78	52	69	45	69	42	.....	42	.....	.....	75	48	87	62	84	53	.....	.....	78	51	73	46
9...	72	37	81	39	76	43	79	55	72	38	70	41	.....	37	.....	.....	81	46	89	59	86	51	.....	.....	79	53	70	56
10...	72	32	80	42	73	47	77	58	69	36	75	43	.....	38	.....	.....	82	47	90	61	87	52	.....	.....	80	55	69	48
11...	59	31	70	42	74	46	82	45	71	40	74	40	.....	41	.....	.....	80	46	89	64	87	61	.....	.....	74	54	72	48
12...	58	30	56	28	57	45	58	46	70	42	67	32	50	32	.....	.....	62	36	74	50	87	49	.....	.....	75	50	69	41
13...	54	31	69	32	65	38	69	54	68	41	59	39	58	33	.....	.....	71	35	79	50	79	42	.....	.....	70	45	63	28
14...	65	26	75	34	71	35	75	46	73	46	67	31	68	26	.....	.....	76	38	85	50	81	41	.....	.....	72	45	69	30
15...	72	26	80	35	72	40	78	49	69	39	72	34	74	27	.....	.....	75	38	87	52	85	42	.....	.....	74	50	69	31
16...	74	30	82	35	75	40	79	51	69	30	72	34	76	27	.....	.....	82	39	88	55	86	45	.....	.....	75	55	70	31
17...	68	28	80	39	71	38	80	52	64	33	72	37	74	29	.....	.....	82	40	86	54	86	45	.....	.....	76	56	71	39
18...	69	25	66	34	73	40	80	54	67	38	68	44	72	35	.....	.....	85	42	90	64	86	50	.....	.....	79	57	70	42
19...	62	30	74	25	75	43	80	50	69	32	73	29	73	22	.....	.....	77	35	89	55	88	45	.....	.....	79	58	75	42
20...	58	29	74	43	73	40	84	50	64	30	74	36	73	31	.....	.....	82	41	89	61	87	50	.....	.....	81	65	76	46
21...	56	25	64	38	73	39	70	47	69	32	65	36	72	44	.....	.....	72	51	87	69	85	50	.....	.....	80	62	76	49
22...	45	19	58	20	65	33	63	39	67	34	54	21	70	20	.....	.....	64	29	77	50	70	37	.....	.....	85	65	72	37
23...	62	15	73	19	69	31	72	41	64	19	65	23	67	16	.....	.....	69	28	82	47	78	32	.....	.....	82	70	75	33
24...	69	20	82	25	76	34	79	45	58	29	74	27	74	18	.....	.....	74	30	88	49	86	35	.....	.....	80	55	79	41
25...	73	27	76	38	77	42	80	56	72	28	80	35	80	23	.....	.....	80	38	90	55	87	45	.....	.....	79	53	77	41
26...	74	28	70	42	74	42	85	56	71	39	78	35	80	29	.....	.....	84	40	90	57	88	49	.....	.....	73	54	73	50
27...	74	28	74	40	73	37	82	48	72	40	75	38	81	33	.....	.....	83	41	88	59	85	58	.....	.....	72	45	74	39
28...	70	30	68	36	74	37	81	52	74	42	78	37	81	30	.....	.....	82	40	89	58	90	47	.....	.....	75	47	78	42
29...	74	31	63	44	75	39	80	52	73	38	47	36	78	35	.....	.....	80	54	86	65	86	57	.....	.....	82	48	76	47
30...	65	30	63	34	75	41	80	55	70	40	75	34	73	28	.....	.....	79	38	87	61	68	48	.....	.....	82	52	75	45
31...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	66.6	30.4	73.1	38.9	71.9	42.9	77.2	52.0	70.1	38.1	70.8	38.3	72.3	34.3	.....	.....	77.6	43.5	86.2	58.1	83.4	49.0	.....	.....	79.1	54.0	72.8	44.1

Date	Arizona.																						Logan, Nev.	
	Bisbee.		Flagstaff.		Fort Apache.		Grand Canyon.		Parker.		Phoenix.		Prescott.		St. Michaels.		San Carlos.		Tucson.		Yuma.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	81	61	72	52	87	56	76	43	99	71	94	74	79	60	79	57	97	65	97	69	96	74	91	70
2	83	63	75	50	90	57	76	42	103	72	98	74	80	55	79	54	100	67	100	70	100	76	95	67
3	80	64	76	46	89	54	68	40	103	70	98	73	82	51	78	53	100	67	96	71	98	73	97	67
4	76	59	71	52	82	57	74	42	100	68	92	71	74	58	69	55	95	67	91	69	95	73	82	66
5	72	59	62	51	76	56	76	42	94	69	78	71	68	56	67	56	84	68	80	66	84	73	90	65
6	74	59	68	46	72	59	76	43	97	75	89	68	74	55	70	54	82	66	86	66	93	71	92	65
7	78	56	70	40	80	50	73	42	102	69	93	72	75	53	70	50	92	64	89	64	95	74	90	60
8	78	57	71	42	83	51	80	43	108	71	95	71	77	49	72	49	94	63	90	63	101	74	96	62
9	79	58	73	42	84	49	73	48	110	69	99	73	80	48	75	46	96	61	99	63	105	73	99	59
10	74	60	71	43	80	55	68	48	106	69	97	76	80	49	75	42	85	67	88	73	102	74	98	58
11	77	57	69	46	80	52	74	51	101	74	96	74	75	52	72	47	93	62	91	66	100	75	98	67
12	77	57	62	39	78	57	70	48	91	59	93	69	70	45	65	42	91	64	92	65	95	64	85	61
13	74	52	62	37	81	38	72	47	93	63	92	61	70	38	60	33	87	55	88	54	95	66	87	53
14	76	51	65	48	78	45	70	46	99	57	96	63	75	42	66	34	89	50	94	54	101	66	94	53
15	75	56	68	36	79	46	70	46	104	60	96	70	78	42	60	32	89	62	92	74	104	69	98	63
16	74	51	67	34	81	43	76	42	104	60	94	74	76	42	70	47	87	54	92	68	102	68	97	63
17	75	54	69	35	80	44	74	42	106	60	94	68	77	41	72	42	90	52	92	63	102	64	97	54
18	77	57	71	36	81	44	74	42	103	59	95	64	78	48	72	46	92	53	92	57	101	64	97	60
19	79	54	71	36	83	45	74	38	101	58	96	62	79	44	75	45	95	51	94	53	99	65	96	60
20	80	55	72	36	82	42	74	38	103	57	96	63	80	44	74	42	95	50	93	52	98	58	96	52
21	80	55	72	43	83	43	74	35	101	57	95	61	79	46	74	49	95	50	95	53	99	61	95	53
22	78	63	71	32	81	43	75	35	103	59	94	63	78	43	67	37	94	50	94	56	96	65	87	61
23	83	58	75	33	86	44	68	35	103	61	99	62	80	46	73	31	95	55	100	57	101	67	93	44
24	83	58	75	37	88	54	76	38	101	64	104	68	86	54	79	37	96	61	100	65	98	66	97	53
25	81	57	71	48	78	61	76	36	95	64	93	69	84	42	79	41	96	64	92	68	95	66	92	57
26	74	58	70	44	76	62	74	34	92	72	89	66	81	45	73	40	91	72	87	67	93	71	82	63
27	74	51	59	43	78	62	76	43	95	65	88	66	84	61	70	41	83	69	87	65	91	71	82	63
28	74	52	69	45	81	43	76	42	96	54	91	69	77	45	75	40	91	58	95	62	55	67	78	56
29	80	56	70	43	83	43	68	38	97	53	93	65	78	45	75	45	95	51	94	61	95	57	82	54
30	78	58	70	36	84	42	64	36	95	53	92	61	78	43	73	42	93	58	94	61	96	52	87	53
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	77.5	56.9	69.6	41.7	81.5	49.9	73.2	41.5	100.2	63.7	94.0	68.0	77.7	48.1	71.9	44.3	92.1	59.9	92.5	63.2	97.5	67.9	91.7	59.1

Climatological Data for September, 1909.

DISTRICT No. 10, GREAT BASIN.

ALFRED H. THIESSEN, District Editor.

GENERAL SUMMARY.

September, 1909, was cooler than usual, although no extended periods of severe cold weather were experienced; and while killing frosts occurred at many places, no great damage was done. The precipitation over the district as a whole was considerably above the normal, the rainy periods extending over several days in many places. The number of rainy days was 5, clear days 16, partly cloudy days 9, and cloudy days 5. The sunshine averaged somewhat below normal.

TEMPERATURE.

The monthly mean temperature for the district as a whole was 59.0° which was 1.4° below the normal.

The mean monthly temperatures were nearly normal in Wyoming, but below normal in Utah, northern Nevada, and California, and above normal in Oregon. The mean temperatures at the various stations differed widely from the normal, the greatest deficiencies being 9.3° at Frisco, Utah. The excesses were, as a rule, much less pronounced, only a few places, principally in Oregon and in the mountain districts of Utah, reporting excesses in temperature, and these were moderate in amount.

During the first decade the weather was unusually warm in most localities, and many stations reported their highest temperatures during this period. Cooler weather prevailed over the greater portion of the district for the remainder of the month with a period of quite low temperatures extending from the 21st to the 26th.

Maximum temperatures above 80° occurred at all, except a few of the more elevated stations. The lowest maximum temperature reported was 70° at Halleck, Nev., on the 1st. Maximum temperatures of 90° or more, occurred at over one-fourth of the stations, while the highest for the month was 98° at Jean, Nev., on the 2d and at Battle Mountain, Nev., on the 3d.

Minimum temperatures of 32°, or lower, were recorded at most stations during the last two decades of the month, although a few stations reported temperatures below freezing during the first decade. The lowest temperatures generally occurred from the 21st to the 25th. There were several minima of 20° or lower reported at exposed points in the mountains. The lowest minimum for the month was 16° at Carlin, Nev.

Killing frosts were reported generally in Nevada on the 12th, and at several station in Utah on the 11th and 12th, but general killing frosts did not occur in Utah until the 22d.

PRECIPITATION.

Precipitation was unusually heavy, averaging for the district 1.25 inches, which was 0.62 inch above the normal. It was above normal at almost every station, and where below normal the deficiencies were very small.

Unusually large amounts fell over most of Utah and Nevada, and several stations reported two and three times the average amount. In Utah there were only a few previous Septembers with more moisture.

The greatest monthly amount reported was 3.75 inches at Silver Lake, Utah; while the least was none at Carlin, Leetville, McAffees Ranch, and Tahoe, all in Nevada. The greatest amount in twenty-four hours was 2 inches at Jean on the 27th and at Humboldt on the 28th, both places being in Nevada.

The precipitation was very unevenly distributed, due to the large number of thunderstorms.

The rainy condition of the last few days in August extended over the first decade of September, the heaviest rain of the month falling, as a rule, on the 1st. The storm of the last of August and the first of September was unusually severe, causing considerable damage to property, and one life was reported lost.

From the 8th to the 25th droughty conditions prevailed in all States except in Utah and Wyoming; in Utah some rain fell on the 11th and in Wyoming on the 11th and 21st.

The next rainy period extended from the 25th to the 30th, but the rains were usually light, although at Odgen, Utah, 1.39 inches fell on the 29th, and in Nevada five stations reported amounts over 1 inch on the 27th and 28th.

Hail fell at Cherry Creek and Mina, Nev., on the 28th.

One inch of snow fell at Evanston, Wyo., and 2.5 inches at Friese Summit and Silver Lake, Utah.

FLOODS IN UTAH DURING AUTUMN OF 1909.

The late summer and autumn of 1909 was the wettest harvest season ever known in southern and eastern Utah. Rains came and persisted for days, and at times for weeks, guttering the mountain sides, swelling the streams, soaking the fields, and littering them with debris. During the harder rains, trickling creeks became raging torrents clogged with debris, dealing destruction throughout their crooked lengths within a few hours, owing to the steepness and hardness of the watershed slopes. The resulting inconvenience and financial loss were hard to measure, but probably $75,000 was kept from the farmers because of the grain and hay that were spoiled, and possibly $50,000 will have to be paid out in labor and money before the property damage can be entirely cleared.

The clumination of the rainy period was definitely marked on August 30-31 and September 1, during which time more than the monthly normal precipitation fell at many places. As a result of these unprecedented rains damage by floods was quite widespread. Unthrashed grain in the fields was soaked disastrously and was not permitted to dry; mountain roads were obliterated, and cross-country roads were rendered impassable; streams were dangerously turbulent, cutting new channels, wrecking bridges, and carrying away large quantities of property. Irrigation systems were ruined, headgates and dams being demolished, canals broken and laterals choked with rubbish.

Scarcely a community in Utah east of the Wasatch Mountains escaped without damage except those far from the mountains.

The post surgeon at Fort Duchesne, Uinta County, reported the loss of a Government building by the flood waters of the Duchesne River, the loss of several bridges over the turbulent tributary streams, and the loss of the life of the mail carrier, who had attempted to ford the stream near Myton. The observer at Vernal, Uinta County, estimates that 3,000 tons of hay valued at $6 per ton were destroyed, and that 1,500 bushels of grain worth $1 per bushel were ruined. The mountain roads near Vernal were damaged to the extent of $2,000. A bridge which cost $600 was washed out on the road to Brush Creek Mountain, 3 miles north of Vernal, and another bridge on the same road at the mouth of Steinaker Draw, worth $500, was entirely destroyed, and a number of good bridges on the Vernal-Roosevelt road are gone, entailing a loss of about $900.

The cooperative observer at Emery, Emery County, who measured 4.09 inches of precipitation in three days, reports great damage to all interests in that locality. The county road bridge, the headgates of the Emery Canal and Reservoir Company, and also the headgates of the Independent Canal Company, were completely washed away, hardly a piece of timber remaining. Both canals were washed, and broken more or less, from one end to the other. One small house was carried away and several small animals were drowned. Many canyon roads were entirely washed away and in their place were ravines from 5 to 20 feet deep.

At Tropic, Garfield County, the canyon bridge was carried away, and there was some damage to canals and crops. Pinto, Washington County, reports the hay crop damaged from $800 to $1,000, and an additional loss of $200 to dams and ditches. Ranch, Kane County, according to the observer, suffered damage of about $120 to bridges, $900 to hay and grain, $100 to fencing, and $200 by washing and carrying litter into the fields. At Hite, Garfield County, the Colorado River rose seven feet during the first ten days of September, believed by the observer to be due to the flood water from the Fremont, San Rafael, and Price rivers. In the Rio Virgin Valley, in Washington and Kane counties, the floods of the last thirty-six hours of August caused at least $1,000 damage to crops and highways. In Mill Canyon, a tributary to the Santa Clara River in Washington County, the observer measured 4.20 inches of rain on August 30 and 31. Both creeks in Grass Valley rose higher than they have been during the thirty years that the valley has been occupied by settlers. The roads and mill property destroyed were valued at about $800, there being only about one-third of the roads remaining.

Owing to the general barometric conditions in the Southwest during these heavy August-September rains—a large ill-defined, but comparatively deep, low pressure area being located well inland from the southern Pacific coast—the flood conditions were produced only to the east of the Wasatch Mountains in Utah, though good rains were general over the entire State at that time. Floods were more or less damaging in all the valleys lying in the southern Wasatch Mountains, though these were caused principally by the heavy rains near the headwaters of the streams.

SMUDGE POT TEST.

A test was made at the Utah State Fair Grounds at Salt Lake City by the State Horticultural Inspector, Mr. Joseph Taylor, and the writer on four sets of smudge pots submitted in contest.

Since it was impracticable to conduct the tests in an orchard, the pots were arranged in an open field, and were spaced as recommended by the exhibitors. In regular orchard practise the pots would have been much more efficient, as the foliage would have acted more or less like a blanket, conserving and absorbing the heat produced by the pots.

The following plan shows just how the pots were placed.

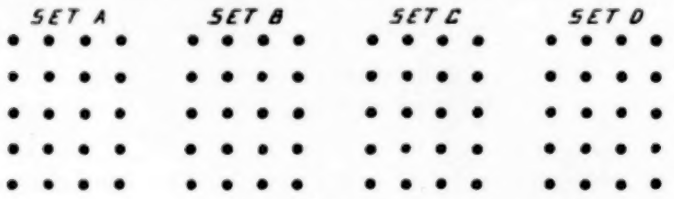

FIG. 1.

Each set of pots occupied about one-fifth of an acre, and each set were about 64 feet apart. The pots of the individual sets spaced about 20 feet apart. The different sets were designated A, B, C, and D. In this article it is the intent to give an idea of how the temperature conditions may be controlled by these protective devices rather than show the efficiency of any particular make of pot.

Thermometers were placed in the center of each smudged area, and another well outside of the smudged zone and to the windward. The tests were carried through two nights, and the results are show in the following tables.

Temperature readings were taken every half hour from the time of beginning the test until just before sunrise. It was not practicable to continue the readings longer as no thermometer shelters were used.

The results showed that on the first night the temperature within the smudged areas was kept on an average of 4.7° higher than the temperature outside. But on the second night the temperature inside the smudged areas was raised only 1.9°. This great difference was due to the fact that the wind during the first night was very light, probably averaging less than 2 miles an hour, while on the second night the wind averaged

Set A.

Time.	First night. Pots lighted at 12:55 a. m.			Time.	Second night. Pots lighted at 12:45 a. m.		
	Outside reading.	Inside reading.	Degrees raised.		Outside reading.	Inside reading.	Degrees raised.
	°	°	°		°	°	°
1:30 a. m.	28.0	32.0	4.0	1:00 a. m.	40.5	43.5	3.0
2:00 a. m.	28.5	31.0	2.5	1:30 a. m.	40.0	41.0	1.0
2:30 a. m.	26.5	30.5	4.0	2:00 a. m.	39.0	41.0	2.0
3:00 a. m.	27.0	32.5	5.5	2:30 a. m.	40.0	41.5	1.5
3:30 a. m.	29.0	33.5	4.5	3:00 a. m.	39.0	41.0	2.0
4:00 a. m.	28.0	31.0	3.0	3:30 a. m.	38.0	40.0	2.0
4:30 a. m.	27.0	31.5	4.5	4:00 a. m.	38.0	41.0	3.0
5:00 a. m.	30.0	33.5	3.5	4:30 a. m.	38.0	40.0	2.0
5:30 a. m.	29.5	33.5	4.0	5:00 a. m.	39.5	40.0	0.5
6:00 a. m.	29.5	33.0	3.5	5:30 a. m.	38.5	40.0	1.5
6:30 a. m.	28.0	32.0	4.0	6:00 a. m.	38.0	39.5	1.5
6:45 a. m.	27.5	33.0	5.5	6:30 a. m.	38.0	38.5	0.5
				6:45 a. m.	38.0	39.5	1.5

Set B.

Time.	First night. Pots lighted 12:55 a. m.			Time.	Second night. Pots lighted 12:45 a. m.		
	Outside reading.	Inside reading.	Degrees raised.		Outside reading.	Inside reading.	Degrees raised.
	°	°	°		°	°	°
1:30 a. m.	28.0	33.5	5.5	1:00 a. m.	40.5	45.5	5.0
2:00 a. m.	28.5	33.0	4.5	1:30 a. m.	40.0	43.5	3.5
2:30 a. m.	26.5	33.0	6.5	2:00 a. m.	39.0	42.0	3.0
3:00 a. m.	27.0	33.0	6.0	2:30 a. m	40.0	41.5	1.5
3:30 a. m.	29.0	35.0	6.0	3:00 a. m.	39.0	41.0	2.0
4:00 a. m.	28.0	32.0	4.0	3:30 a. m.	38.0	42.0	4.0
4:30 a. m.	27.0	32.0	5.0	4:00 a. m.	38.0	41.0	3.0
5:00 a. m.	30.0	34.0	4.0	4:30 a. m.	38.0	40.0	2.0
5:30 a. m.	29.5	34.0	4.5	5:00 a. m.	39.5	41.0	1.5
6:00 a. m.	29.5	33.5	4.0	5:30 a. m.	38.5	41.0	2.5
6:30 a. m.	28.0	32.0	4.0	6:00 a. m.	38.0	40.0	2.0
6:45 a. m.	27.5	35.5	8.0	6:30 a. m.	38.0	40.0	2.0
				6:45 a. m.	38.0	40.5	2.5

Set C.

Time.	First night. Pots lighted at 12:55 a. m.			Time.	Second night. Pots lighted at 12:45 a. m.		
	Outside reading.	Inside reading.	Degrees raised.		Outside reading.	Inside reading.	Degrees raised.
	°	°	°		°	°	°
1:30 a. m.	28.0	33.0	5.0	1:00 a. m.	....	....	...
2:00 a. m.	28.5	32.0	3.5	1:30 a. m.	40.0	41.0	1.0
2:30 a. m.	26.5	33.0	6.5	2:00 a. m.	39.0	41.5	2.5
3:00 a. m	27.0	32.0	5.0	2:30 a. m.	40.0	41.0	1.0
3:30 a. m.	29.0	33.0	4.0	3:00 a. m.	39.0	39.5	0.5
4:00 a. m.	28.0	32.0	4.0	3:30 a. m.	38.0	40.5	2.5
4:30 a. m.	27.0	33.0	6.0	4:00 a. m.	38.0	40.0	2.0
5:00 a. m.	30.0	33.5	3.5	4:30 a. m.	38.0	40.0	2.0
5:30 a. m.	29.5	33.0	3.5	5:00 a. m.	39.5	41.0	2.5
6:00 a. m.	29.5	34.0	4.0	5:30 a. m.	38.5	40.0	1.5
6:30 a. m.	28.0	32.5	4.5	6:00 a. m.	38.0	40.0	2.0
6:45 a. m.	27.0	33.0	6.0	6:30 a. m.	38.0	39.0	1.0
				6:45 a. m.	38.0	....	...

Set D.

Time.	First night. Pots lighted at 12:55 a. m.			Time.	Second night. Pots lighted at 12:45 a. m.		
	Outside reading.	Inside reading.	Degrees raised.		Outside. reading.	Inside reading.	Degrees raised.
	°	°	°		°	°	°
1:30 a. m.	28.0	32.0	4.0	1:00 a. m.	40.5	43.0	2.5
2:00 a. m.	28.5	32.0	3.5	1:30 a. m.	40.0	41.5	1.5
2:30 a. m.	26.5	32.5	6.0	2:30 a. m.	39.0	41.5	2.5
3:00 a. m.	27.0	32.0	5.0	2:30 a. m.	40.0	41.0	1.0
3:30 a. m.	29.0	35.0	6.0	3:00 a. m.	39.0	41.0	2.0
4:00 a. m.	28.0	33.0	5.0	3:30 a. m.	38.0	42.0	4.0
4:30 a. m.	27.0	32.5	5.5	4:00 a. m.	38.0	42.0	4.0
5:00 a. m.	30.0	34.0	4.0	4:30 a. m.	38.0	41.0	3.0
5:30 a. m.	29.5	33.0	3.5	5:00 a. m.	39.5	41.5	2.0
6:00 a. m.	29.5	34.0	4.5	5:30 a. m.	38.5	40.0	1.5
6:30 a. m.	28.0	34.0	6.0	6:00 a. m.	38.0	39.0	1.0
6:45 a. m.	27.5	34.0	6.5	6:30 a. m.	38.0	38.0	0.0
				6:45 a. m.	38.0	38.0	0.0

about 8 miles per hour. During the first night the temperature went so low that fruit would have been damaged, were the fruit inside the smudged areas it would have been saved. During the second night the fruit would have been in no danger, but the experiment showed that even with the comparatively high wind, the temperature was raised very nearly 2°.

EARTHQUAKE AT SALT LAKE CITY, UTAH.

At this city at 7:41 p. m. many residents felt a distinct earthquake shock which is reported to have been the most violent ever experienced in this section. The vibrations were noticed only for a minute, and generally by people who were either reclining or sitting. The shocks were strong enough to swing doors, rattle windows, and chandeliers. The foregoing record was made at the University of Utah, situated at the eastern outskirts of the city.

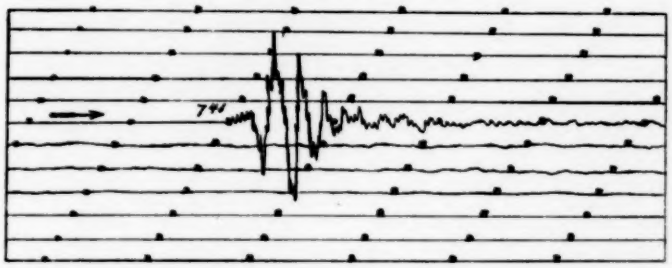

FIG. 2.—Earthquake record made at the University of Utah.

The University of Utah maintains the only seismological station in the inter-mountain region. The above record was made by one of the two earthquakes which visited Salt Lake City Tuesday evening at 7:41 and 8:24, October 5. The disturbance was caused by a slipping of great crustal blocks at the western face of the Wasatch Mountains and passing north and south immediately east of Salt Lake City and Ogden.

Dr. F. J. Pack of the university said that in all probability the quake was due to the slipping of a fault on the western face of the Wasatch Mountains. The press reports showed that the disturbance was felt as far north as Preston, Idaho, and as far south as Salt Lake City, Utah. The most violent shocks were observed at Malad, Logan, and Ogden. The fault above alluded to extends along the eastern edge of the city near Fort Douglas, then swings to the northwest above Capitol Hill, and then rounds the point of the mountain beyond Warm and Hot Springs.

A second shock less violent than the first was felt at 8:25 p. m. on the same day.

TABLE 1.—*Climatological data for September, 1909. District No. 10, Great Basin.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Border	Uinta	6,085	7	52.9	.....	81	25	17	22	50	3.27	.....	1.90	.....	6	13	8	9	w.	S. W. Condron
Evanston	....do	6,860	13	52.3	− 0.6	77	9†	19	22	45	1.22	+ 0.27	0.54	1.0	6	16	11	3	w.	Frank Tucker
Idaho.																				
Geneva	Bear Lake	.....	2	.....	.....	.....	.....	.....	.....	.....	1.40	.....	0.76	0.0	6	14	14	2	.....	F. W. Boehme
Grace	Bannock	5,400	3	57.5	.....	83	27	23	22	52	1.63	.....	0.52	0.0	12	18	10	2	s.	E. A. Ekern
Oxford	....do	4,750	2	.....	.....	.....	.....	.....	.....	.....	2.69	.....	0.63	0.0	9	15	11	4	.....	Edwin Smith.
Paris	Bear Lake	5,946	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Norton.
Stone	Oneida	4,520	2	.....	.....	90	3†	.....	.....	.....	1.81	.....	0.69	0.0	4	22	4	4	s.	Thos. W. Roe.
Weston	....do	4,610	12	58.5	+ 0.6	86	25	25	22	46	2.08	+ 1.40	0.63	0.0	8	15	4	11	s.	Wm. T. Chatterton
Utah.																				
Annabella	Sevier	5,250	4	.....	.....	.....	.....	.....	.....	.....	0.64	.....	0.20	0.0	6	.....	.....	.....	.....	J. W. Fairbanks.
Beaver	Beaver	6,000	6	57.8	.....	78	24	32	22†	40	1.83	.....	0.58	0.0	7	14	11	5	sw.	James Connell.
Black Rock	Millard	4,872	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. H. Cassell.
Blacksmiths Fork	Cache	5,500	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Card Canyon	....do	5,000	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Castle Rock	Summit	6,244	6	.....	.....	.....	.....	.....	.....	.....	1.28	+ 0.61	0.50	.....	5	14	11	5	w.	David Moore.
Cedar City	Iron	5,750	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. M. Foster.
Corinne	Boxelder	4,240	39	63.6	− 1.7	92	3†	31	23†	53	1.97	+ 1.31	0.70	0.0	5	14	9	7	.....	A. C. Murphy.
Coyote	Garfield	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. E. Clayton.
Deseret	Millard	4,541	15	61.0	− 0.8	89	1	27	22	51	0.39	− 0.39	0.18	0.0	5	20	4	6	s.	S. W. Western.
Enterprise (near)	Washington	4,270	1	.....	.....	.....	.....	.....	.....	.....	2.76	.....	0.63	0.0	6	14	10	6	s.	John Day
Farmington	Davis	4,267	9	59.2	− 0.5	83	18	30	22	48	1.39	.....	0.53	0.0	6	20	10	0	nw.	Charles Boylin.
Fillmore	Millard	5,100	19	63.6	+ 2.1	90	24	29	22	48	1.81	+ 0.86	0.85	0.0	5	.....	.....	.....	.....	J. J. Starley.
Frisco	Beaver	7,318	15	58.8	− 9.3	79	10†	33	22	32	1.14	+ 0.45	0.24	0.0	8	.....	.....	.....	.....	E. R. Smyth.
Garland	Boxelder	4,350	...	58.8	.....	86	25	31	21	45	3.02	.....	0.87	0.0	9	16	11	3	s.	Harry B. Shaw.
Garrison[b]	Millard	.....	6	60.1	.....	89	25	25	22	41	2.00	.....	0.85	0.0	5	19	3	8	s.	E. M. Smith.
Golden Reef	Beaver	7,000	...	.....	.....	.....	.....	.....	.....	.....	1.07	.....	0.39	0.0	6	.....	.....	.....	.....	D. W. Woodard.
Government Creek	Tooele	5,277	9	59.2	− 2.1	82	2†	27	22	40	1.24	.....	0.42	0.0	5	17	10	3	n.	Walter James.
Heber	Wasatch	5,606	16	55.6	+ 0.4	80	2†	22	23	54	0.71	− 0.27	0.22	0.0	6	17	12	1	s.	John Crook.
Henefer	Summit	5,301	10	55.6	+ 1.0	83	24†	20	23	58	1.58	.....	0.50	0.0	7	12	13	5	nw.	Wm. Brewer.
Hoyts Canyon	....do	7,400	...	.....	.....	.....	.....	.....	.....	.....	1.43	.....	.....	.....	.....	.....	.....	.....	.....	James Woolstenhulme.
Huntsville	Weber	5,100	14	.....	.....	.....	.....	.....	.....	.....	1.75	+ 0.88	0.48	0.0	7	15	10	5	.....	Lars Petersen
Ibapah (near)	Tooele	7,500	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. S. Gamwell
Kanosh	Millard	5,250	1	.....	.....	.....	.....	.....	.....	.....	0.36	.....	0.12	0.0	5	.....	.....	.....	.....	Geo. Crane.
Kelton	Boxelder	4,230	31	58.2	− 2.9	83	3	28	21	42	2.05	+ 1.64	0.65	0.0	6	3	26	1	sw.	F. W. Klock.
Levan	Juab	5,010	19	59.2	− 0.9	81	25	30	12†	40	0.81	− 0.45	0.47	0.0	8	21	5	4	sw.	Wm. Brown.
Logan	Cache	4,507	18	60.9	− 0.5	83	25	33	22	31	2.28	+ 1.21	0.62	0.0	7	.....	.....	.....	.....	State Agricultural College
Lucin	Boxelder	4,504	5	54.6	.....	88	1	18	23	54	0.20	.....	0.10	0.0	6	10	11	9	.....	C. J. Burke.
Lund	Iron	5,086	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. E. Smith.
Manti	Sanpete	5,575	15	54.5	− 5.6	72	1	29	24	34	1.85	+ 0.71	0.60	0.0	7	11	5	14	.....	J. M. Anderson.
Marion	Summit	6,750	5	.....	.....	.....	.....	.....	.....	.....	2.50	.....	0.70	0.0	7	10	5	15	nw.	James Woolstenhulme.
Marysvale	Piute	6,180	10	57.8	+ 0.4	84	25	26	23	50	1.52	+ 0.21	0.87	0.0	8	13	9	8	sw.	John W. Henry.
Meadowville	Rich	6,200	10	53.6	− 0.3	78	28	23	22	43	2.40	+ 1.35	0.40	0.0	8	16	4	10	w.	J. S. Moffat.
Milford	Beaver	4,962	5	54.8	.....	78	1†	24	29	44	0.03	.....	0.02	0.0	2	21	4	5	s.	C. M. Temple.
Millville	Cache	4,848	14	.....	.....	.....	.....	.....	.....	.....	4.05	+ 3.03	1.79	0.0	12	.....	.....	.....	.....	Fred Yeates.
Minersville	Beaver	5,070	12	.....	.....	.....	.....	.....	.....	.....	0.78	+ 0.23	0.23	0.0	6	.....	.....	.....	.....	Geo. Roberts.
Modena	Iron	5,479	9	57.6	− 2.6	79	20	30	23	43	1.21	.....	0.82	0.0	5	15	9	6	w.	U. S. Weather Bureau
Morgan	Morgan	5,080	6	56.4	.....	85	25	24	22	43	3.62	.....	1.35	0.0	6	9	18	3	nw.	W. Visick.
Moroni	Sanpete	5,519	1	.....	.....	.....	.....	.....	.....	.....	0.53	.....	0.49	0.0	2	3	27	0	sw.	B. F. Eliason.
Mount Nebo	Utah	4,650	8	61.8	.....	85	25	31	22	38	2.27	.....	0.90	0.0	6	18	10	2	s.	D. C. Walkey.
Mount Pleasant	Sanpete	5,859	17	59.2	− 2.2	82	3	27	22	44	1.12	+ 0.11	0.92	0.0	4	23	3	4	.....	Jane Martin.
Nephi	Juab	6,059	6	.....	.....	.....	.....	.....	.....	.....	1.15	.....	0.41	0.0	7	24	3	3	sw.	A. Madsen.
Nephi (near)	....do	6,059	...	.....	.....	.....	.....	.....	.....	.....	0.68	.....	0.15	0.0	8	8	20	2	sw.	S. R. Boswell.
Oak City	Millard	4,900	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jos. Finlinson.
Ogden (1)	Weber	4,310	8	60.6	.....	83	25	35	18	33	2.70	.....	1.00	0.0	7	18	10	2	nw.	Enoch Farr.
Ogden (2)	....do	4,310	39	63.6	− 1.7	83	4†	44	26	....	2.58	+ 1.85	1.39	0.0	4	22	4	4	w.	W. H. Chevers.
Panguitch	Garfield	6,560	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. C. Syrett.
Panguitch Lake	....do	9,000	...	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.60	T.	2	8	13	9	s.	James E. Prince
Park City	Summit	7,800	12	60.4	+ 6.1	89	2	25	23	53	1.30	+ 0.44	1.10	0.0	2	16	14	0	.....	Irvin Evans.
Parowan	Iron	5,970	18	59.9	− 0.2	85	22†	30	25	44	1.16	+ 0.12	0.50	0.0	6	20	0	10	.....	Scott Matheson
Payson	Utah	4,637	6	.....	.....	.....	.....	.....	.....	.....	1.56	.....	0.50	0.0	6	12	10	8	sw.	D. L. Coombs.
Pinto[a]	Washington	5,907	12	54.6	− 1.5	78	16	25	22	46	2.46	+ 1.08	.....	0.0	7	16	7	7	s.	John H. Harrison.
Promontory	Boxelder	4,913	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. C. Houghton.
Provo	Utah	4,532	17	60.1	− 0.4	86	24	26	22	54	1.31	+ 0.73	0.50	0.0	5	8	21	1	n.	James A. Oliver.
Randolph	Rich	6,442	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. Rex.
Richfield	Sevier	5,350	19	61.3	+ 2.8	88	4	29	22	55	1.08	+ 0.56	0.84	0.0	3	20	0	10	.....	Joseph J. Jensen.
Richins Summit	Summit	6,500	...	.....	.....	.....	.....	.....	.....	.....	1.56	.....	0.92	.....	3	.....	.....	.....	.....	Ernest H. Brewer.
Saltair	Salt Lake	4,220	6	63.0	.....	83	10	41	22	35	1.92	.....	0.80	0.0	9	.....	.....	.....	.....	E. J. Bench.
Salt Lake City	....do	4,366	35	63.2	− 1.9	84	3	38	22	35	1.55	+ 0.70	0.43	0.0	6	12	16	2	se.	U. S. Weather Bureau.
Scipio	Millard	5,260	14	57.8	− 1.6	85	24	20	22	51	1.16	+ 0.16	0.63	0.0	6	14	7	9	sw.	Thos. Memmott.
Silver Lake	Salt Lake	.....	1	50.3	.....	73	2	21	22	41	3.75	.....	0.73	2.5	10	13	9	8	nw.	N. S. Fetherolf.
Soldier Summit	Utah	7,474	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent, D. & R. G. Ry.
Spanish Fork Canyon	....do	.....	...	62.9	.....	84	10	36	22	39	1.86	.....	0.50	0.0	7	21	4	5	.....	U. S. Reclamation Service
Thistle	....do	5,075	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent, D. & R. G. Ry.
Tooele	Tooele	4,900	13	60.6	− 3.0	84	25	33	23	43	2.54	+ 1.67	0.70	0.0	9	5	9	16	n.	E. A. Bonelli
Utah Lake Pump'g Sta.	....do	4,500	4	.....	.....	.....	.....	31	23	....	1.36	.....	0.45	0.0	7	18	8	4	se.	W. A. Knight.
West Canyon	Tooele	7,800	...	.....	.....	.....	.....	.....	.....	.....	1.74	.....	0.65	0.0	5	.....	.....	.....	.....	Walter James
Oregon.																				
Ana River	Lake	.....	...	.....	.....	.....	.....	.....	.....	.....	0.65	.....	0.56	0.0	6	17	12	1	nw.	Curtis Duvall.
Burns	Harney	4,157	19	57.6	+ 4.2	89	15	24	1	48	0.90	+ 0.05	0.48	0.0	5	12	15	3	w.	J. C. Welcome, jr.
Burns Mill	....do	.....	...	.....	.....	.....	.....	.....	.....	.....	0.67	.....	0.35	0.0	4	18	8	4	.....	John P. Sayer.
Cecils Ranch	....do	.....	...	.....	.....	.....	.....	.....	.....	.....	0.21	.....	0.15	0.0	3	13	10	5	nw.	H. D. Cecil.
Christmas Lake	Lake	.....	1	50.8	.....	86	16	15	22	59	0.89	.....	0.37	0.0	7	8	8	14	nw.	John C. Green.
Paisley	....do	4,500	5	50.3[a]	.....	84[a]	9	26[a]	21	35[a]	0.81	.....	0.44	0.0	8	15	13	2	sw.	E. C. Woodward.
"P" Ranch	Harney	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. M. Byrd.
Silver Lake	Lake	4,700	14	55.3	+ 2.1	89	15†	22	24	53	0.89	+ 0.27	0.50	0.0	6	17	11	2	w.	E. K. Henderson.
California.																				
Truckee	Nevada	5,819	38	46.2	− 0.7	77	15†	22	30	47	.....	.....	.....	.....	.....	11	0	19	e.	Agent, So. Pac. Co.
Nevada.																				
Austin	Lander	6,594	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. F. Wiseman
Battle Mountain	....do	4,843	39	61.7	− 0.8	98	3†	25	30	66	0.07	− 0.19	0.07	0.0	1	14	12	4	w.	Agent, So. Pac. Co.
Beowawe	Eureka	4,905	39	55.9	− 7.3	89	1	24	11†	59	0.41	+ 0.20	0.41	0.0	1	27	1	2	se.	Do.
Carlin	Elko	5,232	39	59.4	+ 1.3	96	3	16	21	65	0.00	− 0.11	0.00	0.0	0	25	0	5	sw.	Do.
Carson Dam	Churchill	4,032	3	63.4	.....	90	9	32	22	43	0.23	.....	0.16	0.0	2	17	8	5	w.	U. S. Reclamation Service
Cherry Creek	White Pine	6,450	1	58.6	.....	81	9†	27	22	44	0.99	.....	0.65	0.0	3	14	11	5	w.	J. H. Leishman.
Clover Valley	Elko	6,000	10	57.9	.....	86	9	24	22	47	1.13	.....	0.50	0.0	4	9	9	12	w.	J. F. Wiseman.
Cobre	....do	.....	...	53.7	− 5.5	83	4	19	20	55	1.53	.....	0.45	0.0	8	17	10	3	sw	Agent, So. Pac. Co.

TABLE 1.—*Climatological data for September, 1909. District No. 10*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nevada—Cont'd.																				
Columbia	Esmeraldo	5,750	3	63.6	.....	86	20	35	22	38	2.47	.....	1.52	0.0	4	17	10	3	se.	A. Booth.
Dutton	Elko	5,100	2	54.0	.....	95	15	18	21	67	0.80	.....	0.70	0.0	2	15	7	8	sw.	Golconda Cattle Co.
Elko	do	5,342	39	56.9	+ 0.1	95	3	21	22	68	0.22	− 0.01	0.14	0.0	2	14	5	11	s.	Agent, So. Pac. Co.
Ely	White Pine	6,421	19	57.2	+ 2.0	82	21	26	22	48	2.46	+ 1.88	0.70	0.0	7	18	10	2	w.	G. C. Hunting.
Eureka	Eureka	6,500	7	59.0	.....	82	10†	24	22	43	0.68	.....	0.47	0.0	5	19	5	6	s.	Clay Simms.
Fallon	Churchill	3,965	5	62.2	.....	90	9	31	22	49	0.21	.....	0.20	0.0	2	15	6	9	w.	U. S. Reclamation Service
Fernley	Lyon	4,200	2	65.2	.....	91	18	34	18†	57	0.77	.....	0.77	0.0	1	22	5	3	w.	Do
Gardnerville	Douglas	4,830	10	60.8	.....	90	17	25	30	53	0.01	.....	0.01	0.0	1	16	8	6	se.	William Dangberg.
Geyser	Lincoln		5																	Mrs. J. F. Wambolt.
Golconda	Humboldt	4,697	31	58.8	− 2.8	85	3†	32	21	48	0.80	+ 0.50	0.60	0.0	2	9	14	7	w.	Agent, So. Pac. Co.
Halleck	Elko	5,631	17	.....	.....	70	1	.....	.....	.....	0.62	+ 0.27	0.25	0.0	3	1	17	12	w.	Do.
Hamilton	White Pine	7,977	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Allen.
Humboldt	Humboldt	4,236	39	62.4	+ 1.1	86	9	30	22	42	2.01	+ 1.83	2.00	0.0	2	21	3	6	nw.	Agent, So. Pac. Co.
Jean	Clark	2,074	2	73.3	.....	98	2	46	22	42	2.03	.....	2.00	0.0	2	21	2	7	.....	Agent, Salt Lake Route.
Leetville	Churchill	4,020	3	64.2	.....	92	9	31	22	47	0.00	.....	0.00	0.0	0	23	7	0	w.	U. S. Reclamation Service
Lewers Ranch	Washoe	5,500	22	59.5	− 0.8	86	4	34	11†	45	0.50	− 0.29	0.30	0.0	2	16	13	1	.....	Ross Lewers.
Lovelock	Humboldt	3,977	17	62.0	− 2.1	96	15	32	21†	55	0.47	+ 0.22	0.30	0.0	4	.....	.....	.....	.....	John S. Case.
McAfees Ranch[1]	Esmeraldo	4,835	6	59.6	.....	87	10	25	23	...	0.00	.....	0.00	0.0	0	16	4	2	.....	G. A. McAffee.
Millett	Nye		2	58.4	.....	85	10	25	23	55	2.38	.....	1.00	0.0	4	17	9	4	s.	Fred J. Jones.
Mina	Esmeraldo	4,600	3	64.8	.....	93	9	33	22	51	0.02	.....	0.01	0.0	2	14	6	10	sw.	Agent, So. Pac. Co.
Palmetto	do	6,780	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Isaac McConnell.
Potts	Nye	6,990	17	53.4	− 2.3	80	9	20	22	49	0.35	+ 0.05	0.15	0.0	3	8	10	12	n.	Miss Mamie Potts.
Quinn River Ranch	Humboldt	4,850	8	58.8	.....	92	15	20	18†	60	0.85	.....	0.65	0.0	4	10	6	8	sw.	F. M. Payne.
Reno	Washoe	4,532	39	60.8	+ 1.1	88	8	33	30	47	0.34	+ 0.07	0.20	0.0	4	20	10	0	w.	U. S. Weather Bureau.
Soda Lake	Churchill	4,534	3	65.4	.....	92	9	33	12†	42	0.70	.....	0.50	0.0	2	18	8	4	w.	U. S. Reclamation Service
Tecoma	Elko	4,812	32	58.8	− 1.6	94	1	18	23	57	.....	.....	.....	0.0	...	13	7	10	.....	Agent, So. Pac. Co.
Tonopah	Nye	6,090	3	62.0	+ 3.9	81	10	39	22	29	2.07	+ 1.57	1.76	0.0	4	17	12	1	se.	U. S. Weather Bureau.
Wabuska	Lyon	4,347	7	58.0	.....	84	17†	24	22	54	0.20	.....	0.20	0.0	1	18	8	4	ne.	J. G. Young.
Wells	Elko	5,631	38	56.8	− 1.3	91	4	22	22	56	0.21	+ 0.07	0.06	0.0	6	19	4	7	sw.	Agent, So. Pac. Co.
Winnemucca	Humboldt	4,432	31	58.8	− 1.7	90	9	26	22	50	0.64	+ 0.30	0.47	0.0	5	20	4	6	ne.	U. S. Weather Bureau.

* Precipitation included in that of the next measurement.
* * Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§ § Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖ ‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 10, Great Basin.*

Stations.	River basins.	Day of month.																														Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																
Border	Bear	1.90	.65	T.	.10			T.	.14													.09					T.				.39		3.27
Evanston	do	.25			.08	.20		.09	.06			.54																					1.22
Idaho.																																
Geneva	Bear	.76		.32		.10		.08	.06		.08																					1.40
Grace	do	.52	.14	.06	T.	.17	.11	.01	.08		.07	.05															.18			.22	.02		1.63
Oxford	do	.49	.63			.63		.15	.05			.13	.01														.15			.45			2.69
Paris	do																															
Stone	Deep Creek	.65			.42		T.	.05			T.																		.69			1.81
Weston	Bear	.63	.22			.21			.35		.04	.28																.05		.30			2.08
Utah.																																
Annabella	Sevier				.20	.13	.13	.06		.05		.07																					0.64
Beaver	do	.46			.58	.05	.10					.22														.37	.05	T.					1.83
Black Rock	do																															
Blacksmiths Fork	Bear																															
Card Canyon	do																															
Castle Rock	Weber	.31			.22	.20						.50									.05											1.28
Cedar City	Desert																															
Corinne	Bear	*	.40					T.	.20		T.																.70	.67					1.97
Coyoto	Sevier																															
Deseret	do				T.		.02					.04														.18	.05		.10			0.39
Enterprise (near)	Desert	.62				.36																				*	*	1.15		.63			2.76
Farmington	Great Salt Lake	.18			.53	.20					.35															.03			.10				1.39
Fillmore	Sevier	.56			.16		.85	T.				.02													.22				T.				1.81
Frisco	Desert	.22					.15					.05														.17	.18	.24	.05	.08			1.14
Garland	Bear	.87	.72	.03		.28		.40			.04	.08															.03			.57			3.02
Garrison	Desert	.45			.10	T.	T.	T.				T.														T.	.85	.25	.35				2.00
Golden Reef	do				.07	.03	.25	.05																			.39	.28					1.07
Government Creek	do	.42			T.	.10						.20															.12			.40			1.24
Heber	Jordan	.05			.22			.12	.05			.22	T.																		.05		0.71
Henefer	Weber	.38			.10	.40		T.	.05			.50	.05					T.									T.			.10			1.58
Hoyts Canyon	do				*	*		*	*	*		*							*							*	*			*			1.43
Huntsville	do	.16			T.	.48		.09				.31														.17	.19		.35				1.75
Ibapah (near)	Desert																															
Kanosh	Sevier				.12							.05														.12	.04		.03				0.36
Kelton	Great Salt Lake	.60				.30		*	.50																					*	.65		2.05
Levan	Sevier	.47			.03		.03	.01	.02			.12						T.								.06				.07			0.81
Logan	Bear	.21	.45				.62	.34				.26	.14														.26						2.28
Lucin	Desert	.10	.02	T.		.03	T.	T.	T.	.02																	.01	T.	T.	.02			0.20
Lund	do																															
Manti	Sevier	.60	.05		.50	T.	.34	.12	.04		T.	.20															T.						1.85
Marion	Weber	.60			.70	.37		.04	T.	.40		.37							T.			T.				T.	T.			.02			2.50
Marysvale	Sevier	.87			.03	.28	.08	.15				.05														.25	.04						1.75
Meadowville	Bear	.30	.25			.25	.40	.30	.30		T.	.40															T.			.20			2.40
Milford	Sevier				.02						.01																						0.03
Millville	Bear	.25	.75		.06	.22		1.79	.03		.06	.27	.01														.36	.02		.23			4.05
Minersville	Sevier				T.		.14	.04				.14														.21	.33	T.	.02				0.78
Modena	Desert				.02		.13	T.				T.														.19	.67	T.	.20				1.21
Morgan	Weber	1.00	1.35		.02	.50		T.	T.			.50	.25				T.												T.				3.62
Moroni	Sevier	.49			T.		T.		T.		T.	.04							T.			T.					T.	T.					0.53
Mount Nebo	Jordan	.63			.90			.43				.11														T.	.18		.02				2.27
Mount Pleasant	Sevier	.92			T.		T.	.04	.04			.12							T.									T.					1.12
Nephi	Jordan	.41	.03		.10			.17				.20															.07			.17			1.15
Nephi (near)	do		.02		.07		.03	.11	.15			.15																.06	.09				0.68
Oak City	Sevier																															
Ogden (1)	Weber	.89				.24		.06																						1.39			2.58
Ogden (2)	do	1.00				.29		.10	.05			.38															.11			.71			2.70
Panguitch	Sevier																															
Panguitch Lake	do	T.			T.	T.	T.	T.			T.	T.														.60	.20	T.	T.				0.80
Park City	Weber				1.10					.20																							1.30
Parowan	Desert			.05			.07				.08															.50	.36		1.10				1.16
Payson	Jordan	.35			T.	.11		.38				.50														T.	.02			.20			1.56
Pinto	Desert	.39					.50	.11				.01														*	1.30	.15					2.46
Promontory	Great Salt Lake																															
Provo	Jordan	.40			.50			T.				.25														T.	.08			.08			1.31
Randolph	Bear																															
Richfield	Sevier	.84				.10	.14																									1.08
Richins Summit	Weber	*	*	*	*	*	.92		*			*	.53					T.									T.			.11			1.56
Saltair	Great Salt Lake	.80			.02	.11						.41	.04												.02	.38		.01	.13				1.92
Salt Lake City	Jordan	.32			.17	.26		T.			T.	.39						T.								.17	T.		.24				1.55
Scipio	Sevier	.63			.16		.06	T.			T.	.08														.15	.08	T.	T.				1.16
Silver Lake	Jordan	.73	.01		.55	.55		.06	.13	.01		.45															.68		T.	.58			3.75
Spanish Fork Canyon	do	.44			.13	.03		.50				.30					.42										.04						1.86
Thistle	do																															
Tooele	Great Salt Lake	.55	.02		.07	.17	T.	.26			T.	.41	.01													T.	.35	T.	T.	.70			2.54
Utah Lake Pump'g Sta.	Jordan	.11	T.		.04	.45		T.				.21														.31		.02	.22	T.			1.36
West Canyon	Desert	.65				.12						.25															.17				.55		1.74
Oregon.																																
Ana River	Interior Drainage	.56		.02	.01																					T.		.01	T.	.02	.03		0.65
Burns	do	.48					.15																					.05	.13	.09			0.90
Burns Mill	do	.26		.05	T.																								.35	T.	.01		0.67
Cecils Ranch	do					.01																							.15	.05			0.21
Christmas Lake	do	.37				.04																				.28	.01		.03	.10	.06		0.89
Paisley	do	.44	.15	.03		T.	.05																			.05	.03		.02	.04			0.81
"P" Ranch	do																															
Silver Lake	do	.50		.10		.02					T.															T.	T.	T.	.05	.12	.10		0.89
California.																																0.00
Boca	Truckee																															
Bodie	East Walker																															
Bridgeport	do																															
Donner Ice Camp	Truckee																															0.19
Fales Hot Springs	West Walker					.04		.04																			.11					0.21
Hobart Mills	Truckee				.08																						.02		.05	.05			
Lundy	East Walker																															0.20
Markleeville	Carson																										.20						0.10
Shields Ranch	West Walker																															
Silver Creek	Carson																										.10						
Tahoe	Truckee																															
Truckee	do																															
Nevada.																																
Austin	Reese																															
Battle Mountain	Humboldt	T.			T.	.07	T.																					T.		T.			0.07
Beowawe	do																											.41					0.41
Buckskin	Walker					T.											T.										T.	.35					0.35
Carlin	Humboldt																																0.00

TABLE 2.—*Daily precipitation for September, 1909. District No. 10*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Nevada—Cont'd.																															
Carson Dam	Carson						T.																					.07	.16				0.23
Cherry Creek	Humboldt				T.	T.	T.	.04			T.																.30		.65				0.99
Clover Valley	do				.32						.02																.29		.50				1.13
Cobre	do	.40	.03	T.	.35	.04	.03																			.12			.45	.11			1.53
Columbia	Desert				.02	T.	.07																				*	.86	1.52				2.47
Dutton	Humboldt	.10					.70																										0.80
Elko	do						.08																				.14						0.22
Ely	do				.05	.60	.23	.05	T.																		.70	.01	.82				2.46
Eureka	do							.06																	.01		.08	.06	.47				0.68
Fallon	Carson	.01																										T.	.20		T.		0.21
Fernley	Truckee						T.																						.77				0.77
Gardnerville	Carson																												.01				0.01
Geyser	Humboldt																																
Glenbrook	Truckee																											T.					T
Golconda	Humboldt	.20																											.60				0.80
Halleck	do						.25	.12																			.25						0.62
Hamilton	do																																
Humboldt	do	.01																											2.00	T.			2.01
Jean	Desert				.03																							2.00					2.03
Leetville	Carson																																0.00
Lewer's Ranch	Truckee				T.	.30	T.																						.20				0.50
Lovelock	Humboldt	.30	.04																									.10			.03		0.47
McAfee's Ranch	Desert																																0.00
Millett	Reese	1.00					.60																			.50		.28					2.38
Mina	Desert																											.01	.01				0.02
Mount Rose Ranch	Truckee				T.	T.	T.																				T.	1.30	T.				1.30
Palmetto	Desert																																
Paradise Valley	Little Humboldt																												.80	.20	.15		1.15
Potts	Reese	.15			.05			T.																			T.	T.	.15				0.35
Quinn River Ranch	Humboldt	.12			T.		.04																					.04	.65				0.85
Reno	Truckee	.01			T.	T.	.20																				T.	.08	.05	T.			0.34
Smith	West Walker					T.	T.																					.16					0.16
Soda Lake	Carson	.50			T.	T.																						T.	.20	T.			0.70
Sweetwater	East Walker																																0.00
Tecoma	Humboldt																																
Tonopah	Desert				.01	.10	T.																					1.37	.59				2.07
Wabuska	Walker			T.	T.	T.	T.																				T.	T.	.20				0.20
Wells	Humboldt		.02		.04		.04	.03																			.02		.06				0.21
Willow Point	Little Humboldt																												.06				0.06
Winnemucca	Humboldt	.05				.01	T.																				.01	.23	.34				0.64
Yerington	Walker																																

TABLE 3.—*Maximum and minimum temperatures at selected stations, September, 1909. District No. 10, Great Basin.*

Date.	Wyoming.				Weston, Idaho.		Utah.																		Burns, Oreg.		Elko, Nev.	
	Border.		Evanston.				Corinne.		Deseret.		Government Creek.		Marysvale.		Modena.		Ogden.		Parowan.		Provo.		Salt Lake City.					
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	72	55	70	60	76	60	84	62	.....	.....	76	55	77	58	72	55	74	61	74	51	81	61	79	62	85	51	92	31
2	79	48	75	40	80	52	87	56	.....	.....	78	54	82	45	75	47	76	61	74	52	84	61	82	63	79	41	90	34
3	76	44	76	47	82	52	92	56	.....	.....	82	50	82	47	78	46	77	59	74	51	84	53	84	64	77	45	95	27
4	74	42	68	44	82	49	90	54	.....	.....	82	48	74	48	70	51	77	66	73	50	83	49	82	60	80	48	81	47
5	69	42	65	50	72	57	92	56	.....	.....	72	52	70	50	75	47	69	57	74	48	75	59	70	59	84	46	80	50
6	72	47	70	41	71	47	91	52	.....	.....	74	46	71	51	71	50	72	55	75	46	76	53	75	56	86	44	78	44
7	71	43	65	43	70	49	81	58	.....	.....	76	49	71	42	76	45	71	55	75	45	80	52	74	56	85	38	76	44
8	70	42	67	41	75	50	84	52	.....	.....	76	46	74	42	77	46	73	55	74	47	79	48	75	55	84	44	82	40
9	74	36	77	39	80	45	87	56	.....	.....	79	55	77	39	77	44	74	55	75	43	79	47	79	54	89	47	84	41
10	77	37	73	40	82	44	85	49	.....	.....	82	51	80	42	78	45	70	55	76	38	84	47	81	58	85	41	89	42
11	74	39	67	32	60	38	73	44	.....	.....	75	34	76	40	73	46	73	40	75	35	73	38	75	40	84	44	81	42
12	68	32	49	25	58	35	74	44	.....	.....	60	29	58	36	63	36	57	39	74	31	58	33	57	40	83	42	62	27
13	66	26	62	28	67	32	72	43	.....	.....	67	32	66	29	69	36	66	43	78	39	66	33	65	42	78	38	71	29
14	70	30	70	30	79	37	83	37	.....	.....	76	38	76	32	75	35	71	47	76	40	75	37	75	46	82	42	78	31
15	74	31	72	33	79	38	87	43	.....	.....	79	42	78	34	77	39	74	50	79	42	81	40	78	51	89	41	82	32
16	76	32	76	36	82	36	87	43	.....	.....	80	43	78	35	77	41	75	51	77	43	81	41	82	54	76	34	82	34
17	74	30	70	35	80	40	85	45	.....	.....	81	50	77	37	77	43	78	54	76	45	79	44	80	54	69	28	83	35
18	60	24	60	25	67	28	71	37	.....	.....	70	32	74	42	77	49	61	35	76	48	69	40	64	44	70	29	72	24
19	65	21	66	21	71	29	72	40	.....	.....	75	36	78	38	78	46	67	43	75	53	80	32	72	45	64	32	76	32
20	64	40	65	42	72	45	73	44	.....	.....	80	48	81	39	79	46	72	49	72	48	83	41	78	54	66	29	78	32
21	54	34	60	37	68	39	78	34	.....	.....	68	34	68	47	67	40	61	36	86	43	66	43	58	45	64	24	73	33
22	56	17	54	19	65	25	80	36	.....	.....	67	27	66	27	64	32	57	36	85	41	66	26	59	38	68	34	62	21
23	66	19	68	23	69	26	77	31	.....	.....	70	29	76	26	73	30	65	39	80	38	74	28	67	41	70	35	78	26
24	72	22	74	30	82	40	78	31	.....	.....	81	43	83	34	79	37	77	42	79	34	86	32	82	49	80	36	82	35
25	81	33	75	38	86	43	85	36	.....	.....	82	48	84	45	73	47	83	60	78	30	75	36	84	59	83	38	85	51
26	76	38	73	37	82	50	85	32	.....	.....	70	47	76	42	56	50	73	55	77	47	74	46	76	56	78	39	78	30
27	79	35	75	33	80	43	88	36	.....	.....	78	42	74	37	62	45	73	49	79	43	80	44	80	53	79	43	82	36
28	79	40	77	41	83	46	85	48	.....	.....	79	45	77	41	58	48	78	56	80	42	85	42	81	53	62	37	76	45
29	70	36	70	40	73	43	85	44	.....	.....	70	40	79	37	66	37	67	45	85	44	75	43	74	53	60	29	62	36
30	66	34	65	34	70	42	75	47	.....	.....	71	42	78	39	67	38	65	47	68	44	78	38	71	50	57	43	60	33
31																												
Mns	70.8	35.0	68.5	36.1	75.0	42.0	82.2	44.9	.....	.....	75.2	43.2	75.5	40.0	72.0	43.2	71.1	50.2	76.2	43.6	77.3	42.9	74.6	51.8	76.5	38.7	78.3	35.5

Date.	Nevada.																									
	Ely.		Eureka.		Fallon.		Jean.		Lovelock.		Millett.		Mina.		Quinn River Ranch.		Reno.		Tecoma.		Tonopah.		Winnemucca.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	69	49	76	52	82	55	94	62	84	49	76	53	88	50	79	58	79	52	94	47	73	58	82	53
2	71	48	77	50	84	48	98	66	89	47	79	45	88	53	79	44	80	46	88	48	75	54	81	50
3	70	45	80	48	85	53	90	62	92	38	83	41	89	50	83	52	83	49	86	48	78	55	85	45
4	68	41	79	48	86	53	92	60	90	42	79	45	87	59	85	44	82	50	87	46	72	57	86	51
5	71	46	74	48	84	50	96	62	85	45	77	49	85	46	87	47	79	48	82	49	72	54	84	45
6	75	45	76	47	87	48	92	60	86	43	78	41	87	50	84	48	81	48	84	48	74	56	83	51
7	70	43	76	46	85	50	88	58	79	41	79	45	90	48	85	44	84	49	86	48	77	55	84	45
8	75	43	79	45	88	50	90	60	92	40	82	41	92	50	89	39	88	50	86	46	80	60	87	42
9	78	43	82	51	90	50	92	58	89	38	83	43	93	56	.....	.....	87	50	84	46	81	61	90	42
10	78	50	82	59	88	50	90	56	91	40	85	53	87	49	.....	.....	79	53	84	47	81	59	84	48
11	73	46	76	37	78	46	90	56	90	35	77	44	70	39	.....	.....	67	44	81	46	63	45	63	36
12	59	31	61	29	69	36	84	60	91	38	65	34	83	37	.....	25	70	38	80	44	64	39	67	30
13	70	33	74	32	78	37	82	53	92	40	75	31	86	39	.....	.....	80	37	80	44	71	45	78	32
14	77	37	78	40	82	39	85	50	96	41	79	33	88	42	81	30	83	41	76	38	76	55	83	33
15	78	38	80	48	87	40	90	64	78	43	81	35	87	46	92	33	85	43	78	40	77	59	87	45
16	78	40	81	48	89	40	90	66	89	38	82	35	89	42	89	.....	85	47	76	40	77	59	88	39
17	77	44	80	57	85	43	90	62	82	35	82	38	87	45	.....	.....	80	46	80	38	79	55	74	40
18	75	36	75	32	77	33	90	62	80	42	78	34	86	43	.....	20	81	38	72	31	76	50	74	29
19	76	37	77	43	85	45	92	66	72	38	79	33	90	40	81	30	78	43	68	27	75	56	70	33
20	78	40	80	41	87	46	94	65	73	32	80	40	88	52	79	53	81	45	68	26	81	57	78	51
21	82	44	78	35	75	43	85	55	76	32	74	47	77	38	66	38	71	40	78	24	66	44	61	36
22	74	26	67	24	70	31	85	46	76	34	73	27	84	33	73	20	70	34	79	26	68	39	68	26
23	77	39	76	36	80	32	90	52	74	32	80	25	87	48	82	22	83	36	68	18	75	53	79	33
24	73	50	77	48	85	43	92	50	80	38	79	39	82	53	86	34	80	44	73	22	75	55	86	36
25	77	53	76	50	74	46	88	53	86	40	76	54	78	49	78	49	70	48	88	31	71	49	74	47
26	62	50	70	47	75	41	89	56	84	36	73	48	76	50	79	42	71	42	82	32	78	50	74	40
27	66	47	62	43	70	47	80	50	89	40	61	43	73	49	79	43	72	42	77	40	56	48	69	51
28	63	41	56	43	64	52	82	51	92	47	64	48	76	38	58	44	63	49	72	36	59	44	60	41
29	60	36	64	39	69	46	88	56	82	38	69	35	74	37	61	42	63	41	71	38	61	41	60	38
30	69	41	66	36	64	35	80	55	77	37	67	33	68	40	61	28	63	33	68	34	63	46	60	33
31																								
Mns	72.3	42.1	74.5	43.4	80.1	44.3	88.9	57.7	84.6	39.3	76.5	40.4	83.8	45.7	79.0[a]	38.7[f]	77.3	44.2	79.2	38.3	72.1	51.9	76.9	40.7

Climatological Data for September, 1909.

DISTRICT No. 11, CALIFORNIA.

Prof. ALEXANDER G. McADIE, District Editor.

TEMPERATURE.

September, 1909, was in most respects a normal month. The mean temperature for the district was a fraction of a degree above the normal. There was one warm spell about the middle of the month, and during this time maximum temperatures at a large number of places exceeded 100°. In some of the interior sections temperatures of 105° were reported and at a few places 108°. However, high temperatures are not infrequent at this time of the year. There were no strong north winds, making the warm weather doubly trying. As a whole, weather conditions were quiet and the warm days for the most part typical midsummer days.

PRECIPITATION.

The present September was in marked contrast with September, 1908, when there were heavy rains in the southern counties, accompanied by hailstorms and lightning. No cloudbursts were reported during the present month. The month was practically without rain until the 24th. The last week of the month was one of unsettled, showery weather. A general depression covered the coast, resulting in southerly winds and the first widespread rain area since the end of March. It is interesting to notice that the long dry season, amounting to about 180 days, was terminated by this early storm. The forecasts were timely and accurate.

The precipitation was above the normal, in general about 0.03 inch. In reality, the excess is greater than appears, because during September, 1904, a phenomenal rainfall raised the normal to a value beyond that indicated by the records for a period of fifty years preceding 1904. During the present month the distribution of the rain, both in intensity and frequency, was favorable from industrial and agricultural standpoints. There were comparatively few heavy showers or thunderstorms. The greatest twenty-four-hour rainfall was 1.94 inches at Magalia on the 28th, and the greatest monthly rainfall was 3.57 inches at Helen Mine. The prevailing winds were west. At more than half of the stations west or northwest winds were reported, and at about one-fifth of the stations southerly winds were most frequent.

Along the coast, and especially in the San Francisco Bay section, there was less fog than usual, and the weather in general was considered by most people to have been a pleasanter September than usual. There was much sunshine.

THUNDERSTORM AT SOUTHEAST FARALLON, CAL., ON SEPTEMBER 26, 1909.

O. H. HAMMONDS, Assistant Observer.

On account of the infrequent occurrence of thunderstorms on the Pacific Coast, the following description of such a storm should be of interest.

The storm came from the southeast, but the last wind recorded from a southerly direction previous to the storm was from the southeast at 8:25 p. m. on the 25th. From that time the winds were northerly until 4 a. m. of the 27th, when they changed to the west or southwest.

The clouds of medium and high altitude were from the southeast during the above-mentioned periods. The first lightning, accompanied occasionally by very low thunder, was observed at 7:15 p. m. of the 26th. The flashes were frequent and gradually spread over the sky as the storm approached until at 9:07 p. m. ther was a vivid flash followed immediately by loud and prolonged thunder, the first and only to occur in the vicinity of the station. Occasional distant flashes, mostly in a northerly direction, were observed for about an hour after the rain had ceased.

Rain began at 8:50 p. m. and ended at 9:30 p. m.; total amount of precipitation .07 inch; maximum wind velocity about 34 miles per hour from the northwest.

The station barogram shows a well-defined "squall nose" at about 9 p. m. of the 26th.

TABLE 1.—*Climatological data for September, 1909. District No. 11, California.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon.																			
Klamath Agency	Klamath		1																H. G. Wilson.
Klamath Falls	do.	4,250	18	59.3	+ 0.6	90	16	28	30	47	0.37	− 0.14	0.11	0.0	6				W. H. Heilman.
Lakeview	Lake	4,825	24																Walter Dutton.
Long Valley	do.										0.11		0.05	0.0	4	12	16	8	s. Cyrus L. Becraft.
Merrill	Klamath	4,070	4	54.8		80	23	26	22†	49	0.73		0.53	0.0	3				Mrs. E. L. Gifford.
Yonna	do.	4,146	1	54.7		87	15	24	2	52	1.38		0.48	0.0	9	11	19	0	s. Agent, So. Pac. Co.
California.																			
Alturas	Modoc	4,460	5	57.5		91	15	23	22	60	0.67	+ 0.14	0.34	0.0	6	15	13	2	sw. Prof. C. B. Towle.
Angiola	Tulare	208	9	69.8	− 1.4	101	13	42	22	55	0.00	− 0.09	0.00	0.0	0	24	0	6	nw. Agent, Santa Fe R.R.
Antioch **	Contra Costa	46	30	75.8	+ 4.7	101	14†	58	25	...	0.05	− 0.18	0.05	0.0	1	25	0	5	nw. Agent, So. Pac. Co.
Aptos**	Santa Cruz	102	24	61.3	+ 0.4	92	15	48	18†	...	0.85	+ 0.40	0.52	0.0	3	18	2	10	nw. Do.
Auburn	Placer	1,360	38	68.0		95	1	39	24	...	0.30								Do.
Azusa	Los Angeles	540	7	68.4		104	16	44	20	49	0.06		0.06	0.0	1	24	6	0	A. F. Griffith.
Bagdad	San Bernardino	784	6	87.4		103	14†	64	29	35	0.00		0.00	0.0	0	19	0	11	Agent, Santa Fe R.R.
Bakersfield	Kern	404	20	77.6	+ 1.8	103	16	53	28†	39	0.00	− 0.13	0.00	0.0	0	30	0	0	Do.
Barstow	San Bernardino	2,105	6	73.4	+ 0.1	100	10	44	29	45	0.10		0.10	0.0	1	29	0	1	w. E. L. White.
Beckwith	Plumas	5,005	1	56.8		89	16	23	30	56	1.14		0.41	0.5	6	14	11	5	sw. F. F. Peck.
Berkeley	Alameda	317	22	62.9	+ 1.6	90	15	49	30	33	0.78	+ 0.16	0.54	0.0	3	11	14	5	sw. State University.
Biggs **	Butte	98	10	71.3	+ 1.2	96	17	53	30	....	0.76	+ 0.30	0.35	0.0	3	26	2	2	s. Agent, So. Pac. Co.
Bishop	Inyo	4,450	14	63.4		90	8	34	30		T.		T.						W. A. Chalfont.
Blocksburg	Humboldt	1,700	3	66.2		99	14	39	23	47	1.51		1.00	0.0	2	19	7	4	nw. Victor Hopa.
Blue Canon	Placer	4,695	10	61.3	+ 2.9	83	16	36	30	35	0.25	− 0.91	0.25	0.0	1	26	1	3	n. Agent, So. Pac. Co.
Blythe	Riverside			80.6		104	9	48	30	48	0.63		0.45	0.0	3	23	0	7	sw. H. V. Blenkiron.
Branscomb	Mendocino	2,000	9	61.2	− 0.5	93	12	36	30	42	1.62	+ 0.30	0.62	0.0	5	23	5	2	n. A. J. Haun.
Brawley	Imperial	−105	....	83.2		105	9	56	30	42	0.31		0.31	0.0	1	27	3	0	se. U. S. Weather Bureau.
Brush Creek	Butte	2,140	5	64.1		92	4†	40	21†	48	1.73		1.08	0.0	4	23	2	5	s. Cal. Gas & Electric Co.
Calexico	Imperial	0	4	83.3		103	9†	56	29	36	0.00		0.00	0.0	0	22	3	5	w. J. E. Peck.
Caliente **	Kern	1,290	33	78.1	+ 3.1	103	16	52	29	....	0.00	− 0.08	0.00	0.0	0	30	0	0	w. Agent, So. Pac. Co.
Calistoga **	Napa	363	37	73.7	+ 7.0	95	10†	48	7	....	1.22	+ 0.86	0.55	0.0	3	23	0	7	n. Do.
Campbell	Santa Clara	217	12	64.0	+ 1.6	97	15	41	19†	47	0.75	+ 0.32	0.69	0.0	2	23	3	4	F. M. Righter.
Camptonville (near)	Yuba	3,300	2	71.7		102	16	40	30	46	1.58		1.30	0.0	4	24	0	6	S. B. Johnson.
Cedarville	Modoc	4,675	15	58.4	− 0.2	90	15	28	22	52	0.97	+ 0.55	0.35	0.0	4	11	18	1	sw. T. H. Johnstone.
Chico	Butte	189	39	72.9	− 1.7	101	16	46	18	50	0.86	+ 0.39	0.61	0.0	3	22	4	4	s. Agent, Butte R. R. Co.
Chino **	San Bernardino	714	17	74.4	+ 3.2	100	16	52	5	....	0.00	− 0.04	0.00	0.0	0	25	3	2	w. Agent, So. Pac. Co.
Cisco **	Placer	5,939	38	63.0	+ 7.3	84	22	40	25†	...	1.05	+ 0.67	0.80	0.0	3	25	1	4	Do.
Claremont	Los Angeles	1,200	17	71.4	+ 2.2	104	15†	44	29	43	0.05	− 0.06	0.03	0.0	2	20	10	0	w. F. P. Brackett.
Cloverdale	Sonoma	340	7	67.7		101	15†	42	23	51	2.01		1.50	0.0	4	23	5	2	s. Lloyd Browne.
Colfax	Placer	2,421	38	65.5	− 4.0	90	1†	48	29	40	0.60	+ 0.07	0.50	0.0	2	26	0	4	Agent, So. Pac. Co.
Colusa	Colusa	60	6	70.4		94	16	48	30	38	0.63		0.41	0.0	3				se. W. K. De Jarnatt.
Corning **	Tehama	277	23	77.4	+ 3.5	92	9†	60	25†	...	0.60	+ 0.39	0.45	0.0	2	23	0	7	n. Agent, So. Pac. Co.
Cuyamaca (1)	San Diego	4,677	10	65.1	+ 6.1	83	3†	43	28	29	0.30	− 0.16	0.30	0.0	1	23	6	1	e. L. L. Macquarie.
Daunt	Tulare	4,000	2	67.8		93	17	37	27	47	0.00		0.00	0.0	0	23	7	0	D. L. Wishon.
Davisville	Yolo	51	37	68.1	− 3.9	100	15†	42	30	52	0.55	+ 0.34	0.43	0.0	2	23	4	3	S. H. Beckett.
Deer Creek	Nevada	3,700	2	62.2		90	12	34	30	47	0.86		0.46	0.0	3	23	5	2	Cal. Gas & Electric Co.
Delta	Shasta	1,138	24	71.8	+ 2.5	101	13†	41	30	45	2.09	+ 1.09	0.98	0.0	4	17	9	4	s. Agent, So. Pac. Co.
Denair	Stanislaus	126	9	72.2	+ 1.1	105	16	39	30	49	0.00	− 0.16	0.00	0.0	0				Agent, Santa Fe R.R.
Dobbins	Yuba	1,650	5	74.2		98	15†	52	30	40	0.67		0.62	0.0	3	21	0	9	Bishop & Taylor.
Dudleys	Mariposa	3,000	....	62.4		90	9†	38	12†	48	0.12		0.12	0.0	1	20	5	5	s. W. H. Dudley.
Dunnigan **	Yolo	65	32	80.7	+ 6.1	98	14†	65	20	....	0.45	+ 0.09	0.45	0.0	1	25	0	5	n. Agent, So. Pac. Co.
Dunsmuir **	Siskiyou	2,285	20	63.2	+ 2.7	95	6	38	30	....	2.23	+ 0.99	1.08	0.0	4	25	0	5	Do.
Durham	Butte	160	14	71.2	+ 3.1	100	16	44	30	47	0.90	+ 0.39	0.60	0.0	3	22	4	4	s. R. W. Durham.
El Cajon	San Diego	482	10	70.6	+ 1.6	105	15†	43	29	53	0.00	− 0.12	0.00	0.0	0	30	0	0	sw. H. H. Kessler.
Electra	Amador	725	5	74.8		103	9†	46	29	42	0.00	− 0.49	0.00	0.0	0	24	0	6	Cal. Gas & Electric Co.
Elsinore	Riverside	1,234	14	71.4	− 2.8	103	14†	36	29	57	0.00	− 0.08	0.00	0.0	0	29	1	0	w. W. H. Bohannon.
Emigrant Gap	Placer	5,230	35	61.0	+ 2.0	84	5	30	26†	45	0.56	+ 0.24	0.33	0.0	2	24	0	6	Agent, So. Pac. Co.
Escondido	San Diego	657	15	70.0	+ 1.0	108	15†	37	29	57	0.05	+ 0.03	0.05	0.0	1	13	17	0	w. A. R. Moon.
Eureka	Humboldt	64	23	53.6	− 1.3	74	15	44	18	23	0.61	− 0.77	0.31	0.0	5	12	4	14	n. U. S. Weather Bureau.
Farmington **	San Joaquin	111	30	76.2	+ 4.2	103	15	53	30	....	T.	− 0.21	T.	0.0	0	24	2	4	nw. Agent, So. Pac. Co.
Folsom	Sacramento	252	37	73.2	+ 0.4	104	15	50	21	45	0.12	− 0.21	0.12	0.0	1	24	2	4	s. F. O. Hutton.
Fordyce Dam	Nevada	6,500	14	54.9		75	3†	32	30	35	1.06	− 0.67	0.86	0.0	3	19	6	5	sw. E. E. Roening.
Fouts Springs	Colusa	1,650	5	66.6		95	4	42	21†	47	0.53	+ 0.08	0.29	0.0	3	29	0	1	H. S. Green.
Fresno	Fresno	293	22	74.3	0.0	101	15	51	30	41	0.00	− 0.19	0.00	0.0	0	24	3	3	nw. U. S. Weather Bureau.
Fruto **	Glenn	624	20	73.4	+ 1.1	97	4†	48	30	....	0.45	+ 0.05	0.25	0.0	3	26	0	4	s. Agent, So. Pac. Co.
Galt **	Sacramento	49	31	70.7	− 1.3	100	15†	53	1†	....	0.15	− 0.11	0.15	0.0	1	24	0	6	w. Do.
Georgetown	El Dorado	2,650	36	69.0	− 4.0	93	15	42	30	35	0.37	− 0.33	0.37	0.0	1	23	2	5	sw. C. M. Fitzgerald.
Gilroy **	Santa Clara	193	35	68.4	+ 2.4	108	14†	50	19†	....	0.16	− 0.01	0.16	0.0	1	25	0	5	se. Agent, So. Pac. Co.
Gold Run	Placer	3,222	10	69.6	+ 0.3	95	4	38	29	42	0.53	− 0.37	0.25	0.0	4	23	3	4	Do.
Gonzales **	Monterey	127	10	54.6	− 6.5	100	13†	38	4†	...	0.05	− 0.10	0.03	0.0	2	23	0	7	n. Do.
Grass Valley	Nevada	2,690	37	66.8		92	16	37	30	36	0.51	− 0.33	0.51	0.0	1	23	5	2	sw. F. R. Hull.
Greenville	Plumas	3,600	15	59.7	+ 3.0	92	15	28	23	61	0.85	− 0.40	0.37	0.0	5	19	3	6	sw. C. H. Higbie.
Groveland	Tuolumne	2,828	....	67.2		92	16	42	30	41	0.09		0.09	0.0	1	23	7	0	H. S. Richardson.
Guinda **	Yolo	350	11	74.8	+ 0.9	103	4	52	19	...	0.54	− 0.01	0.30	0.0	3	24	2	4	Agent, So. Pac. Co.
Hanford	Kings	249	9	76.8	+ 5.9	101	4	50	26	37	0.00	− 0.50	0.00	0.0	0	29	1	0	Agent, Santa Fe R.R.
Healdsburg	Sonoma	110	16	66.2	+ 3.4	103	16	42	17†	54	1.34	+ 0.48	0.69	0.0	3	19	8	3	s. C. A. Menefee.
Heber	Imperial	−20	3	83.4		108	9†	51	29	45	T.		T.	0.0	0	28	2	0	w. E. F. Chumard.
Helen Mine	Lake	2,750	8	76.3		90	14†	50	24	....	3.57	+ 2.38	1.85	0.0	3	21	4	5	sw. A. Rocca.
Hollister	San Benito	284	35	64.2	− 1.4	103	15	41	30	50	0.06	− 0.06	0.06	0.0	1	22	6	2	w. J. N. Thompson.
Hornbrook **	Siskiyou	2,154	21	64.5	− 0.5	92	4†	48	16†	....	T.	− 0.22	T.	0.0	0	18	0	13	Agent, So. Pac. Co.
Hot Springs	Tulare	3,300	2	67.6		90	15†	43	24†	32	T.		T.	0.0	0	29	0	1	U. S. Forest Service.
Hullville (near)	Lake	2,250	2	63.0		98	14	33	17†	62	1.18		0.48	0.0	5	13	9	8	nw. S. J. Smith.
Idyllwild	Riverside	5,250	8	59.0		82	9	32	2	45	0.40		0.25	0.0	2	25	5	0	w. R. D. Fobes.
Independence	Inyo	3,907	13	66.2	− 2.9	89	8	40	29	39	0.07	0.00	0.07	0.0	1	19	10	1	s. U. S. Weather Bureau.
Indio	Riverside	−20	31	84.2	− 2.3	108	9	58	30	43	1.12	+ 1.01	0.94	0.0	2	26	4	0	nw. F. N. Johnson.
Inskip	Butte	4,975	2	57.0		80	5†	30	30	34	3.04		1.50	0.0	3	19	6	5	Cal. Gas & Electric Co.
Ione **	Amador	287	31	65.3	− 6.3	95	14†	48	30	....	0.00	− 0.28	0.00	0.0	0	26	0	4	s. Agent, So. Pac. Co.
Iowa Hill	Placer	2,825	28	68.2	+ 0.4	93	15	43	30	33	0.38	− 0.47	0.26	0.0	2	23	0	7	sw. C. F. Macy.
Jamestown	Tuolumne	1,471	6	69.6		97	16	43	30	43	0.00		0.00	0.0	0	25	4	1	Agent Sierra R. R.
King City	Monterey	333	22	74.8	+ 8.8	103	15	54	8	43	0.00	− 0.21	0.00	0.0	0	30	0	0	Agent, So. Pac. Co.
La Porte	Plumas	5,000	15	58.6	+ 5.3	83	4†	33	30	35	1.18	− 0.91	0.83	0.0	3	21	5	4	w. C. W. Hendel.
Le Grand	Merced	255	9	71.9	+ 0.1	102	15	43	30	47	0.00		0.00	0.0	0	29	0	1	w. Agent, Santa Fe R.R.
Lemon Cove	Tulare	600	14	69.8	− 4.6	102	16	36	30	53	0.00	− 0.45	0.00	0.0	0	25	3	2	w. G. W. Sandidge.
Lick Observatory	Santa Clara	4,209	20	64.1	+ 2.2	82	9†	41	30	16	0.00	− 0.34	0.00	0.0	0	20	6	4	se. The Director.
Livermore	Alameda	485	38	69.3	+ 1.1	102	16	44	30	50	0.62	+ 0.31	0.47	0.0	2	25	3	2	w. E. G. Still.
Lodi	San Joaquin	45	27	68.0	− 1.7	97	16	42	30	43	0.12	− 0.34	0.12	0.0	1	24	4	2	w. Ezra Fiske.
Lone Pine	Inyo	2,728	4	65.4		91	10	39	29	44	0.36		0.35	0.0	2	21	8	1	s. G. F. Marsh.
Long Valley	Lassen																		A. G. Evans.
Los Angeles	Los Angeles	293	32	68.6	+ 2.1	103	16	52	29	32	0.04	− 0.04	0.04	0.0	1	14	15	1	sw. U. S. Weather Bureau

TABLE 1.—*Climatological data for September, 1909. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Cont'd.																				
Los Banos **	Merced	121	22	72.8	− 1.2	96	9†	56	25	....	0.00	− 0.13	0.00	0.0	0	21	0	9	w.	Agent, So. Pac. Co.
Los Gatos	Santa Clara	600	22	66.8	+ 1.2	98	15	45	30	40	1.15	+ 0.78	0.60	0.0	2	22	4	4	n.	F. H. McCullagh.
Macdoel	Siskiyou	4,258	2	55.5	.....	89	15	23	30	54	0.15	.....	0.08	0.0	5	17	12	1	nw.	Robert Miller.
Madeline	Lassen	5,270	....	55.9	.....	88	15	24	22	56	0.35	.....	0.17	0.0	5	20	5	5	nw.	J. H. Williams.
Magalia	Butte	2,321	5	66.0	.....	93	15	43	30	40	3.28	.....	1.94	0.0	4	20	5	5	n.	Agent, Butte Co. R. R.
Mammoth Tank	Imperial	257	31	86.2	− 3.8	107	9†	58	30	38	0.04	− 0.01	0.04	0.0	1	22	5	3	w.	Agent, So. Pac. Co.
Marysville	Yuba	67	38	75.0	+ 1.0	97	7	49	17†	42	0.75	+ 0.46	0.75	0.0	1	26	0	4	.....	Do.
Mecca	Riverside	−185	3	82.8	.....	104	9†	57	30	40	0.40	.....	0.40	0.0	1	29	0	1	se.	A. Lunsted.
Menlo Park**	San Mateo	64	31	66.7	+ 2.6	96	15	48	30	....	1.12	+ 0.84	0.94	0.0	2	19	0	11	nw.	Agent, So. Pac. Co.
Merced	Merced	173	35	70.2	− 3.5	105	16	47	4†	52	0.00	− 0.18	0.00	0.0	0	24	0	6	nw.	Agent, Santa Fe R. R.
Mill Creek (1)	Amador	.....	2	64.2	.....	90	16	41	30	40	0.08	.....	0.05	0.0	2	23	0	7	w.	Cal. Gas & Electric Co.
Milton (near)	Calaveras	660	19	72.2	+ 0.7	100	16	49	30	35	T.	− 0.42	T.	0.0	0	22	5	3	nw.	J. H. Southwick.
Modesto **	Stanislaus	90	37	75.3	+ 0.6	101	21	54	14	....	0.00	− 0.19	0.00	0.0	0	30	0	0	.....	Agent, So. Pac. Co.
Mojave	Kern	2,751	32	66.7	− 7.2	96	10	31	30	....	0.00	− 0.07	0.00	0.0	0	30	0	0	nw.	Do.
Mokelumne Hill	Calaveras	1,550	16	72.2	+ 6.4	96	16	50	26	27	0.02	− 0.52	0.02	0.0	1	23	2	5	.....	C. E. Prindle.
Mono Ranch	Ventura	3,210	5	62.8	.....	89	16	37	29	40	0.00	− 1.69	0.00	0.0	0	21	9	0	e.	H. Lathrop.
Montague	Siskiyou	2,450	21	65.1	− 3.4	97	8	36	21	50	0.45	+ 0.23	0.25	0.0	4	16	5	9	n.	G. H. Chambers.
Monterey **	Monterey	15	44	62.0	+ 0.5	80	13†	48	30	....	0.64	+ 0.46	0.50	0.0	3	17	12	1	nw.	Agent, So. Pac. Co.
Monterio	Kern	4,500	10	68.4	− 1.6	94	3†	38	29	44	0.10	− 0.11	0.10	0.0	1	8	22	0	nw.	John C. Knecht.
Monumental	Del Norte	.....	4	61.4	.....	94	15	36	29	50	3.46	.....	0.74	0.0	8	19	3	8	.....	G. F. Morgan.
Mount Tamalpais	Marin	2,375	10	66.2	+ 0.1	93	15	44	1	26	1.16	+ 0.64	0.83	0.0	5	22	4	4	nw.	U. S. Weather Bureau.
Napa (1)§	Napa	20	32	63.7	+ 0.1	100	16	43	19	51	0.85	+ 0.29	0.37	0.0	3	25	2	3	s.	Thomas Hull.
Napa (2)	.....do.....	60	31	66.1	+ 2.5	102	15	46	30	48	0.75	+ 0.18	0.30	0.0	3	21	6	3	s.	W. H. Martin. (S. H.)
Needles	San Bernardino	477	17	73.8	−10.9	98	10	45	29	46	1.47	+ 1.33	0.57	0.0	4	23	6	1	.....	Agent, Santa Fe R. R.
Nevada City	Nevada	2,580	17	65.0	+ 4.4	95	14†	35	30	51	0.55	− 0.18	0.47	0.0	2	23	0	7	sw.	S. W. Marsh.
Newcastle	Placer	970	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George D. Kellogg.
Newhall **	Los Angeles	1,200	32	70.6	− 0.9	102	15	55	27	....	0.09	+ 0.03	0.09	0.0	1	25	2	3	se.	Agent, So. Pac. Co.
Newman	Stanislaus	91	20	73.6	− 0.6	102	15†	45	30	48	0.00	− 0.26	0.00	0.0	0	28	0	2	n.	E. S. Wangenheim.
Nimshew	Butte	2,500	5	66.7	.....	92	14†	40	30	40	2.14	.....	1.13	0.0	5	23	0	7	.....	Cal. Gas & Electric Co.
North Bloomfield	Nevada	3,200	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. G. Shand.
North Fork	Madera	3,000	5	61.2	.....	88	22	38	15	46	T.	.....	T.	0.0	0	19	9	2	w.	C. H. Shinn.
Oakdale **	Stanislaus	156	15	71.6	+ 0.2	102	16	53	26	....	0.00	− 0.14	0.00	0.0	0	24	5	1	nw.	Agent, So. Pac. Co.
Oakland	Alameda	36	33	62.8	+ 1.6	88	12†	50	18†	31	0.69	+ 0.31	0.36	0.0	3	14	9	7	w.	Chabot Observatory.
Ojai Valley	Ventura	900	3	67.4	.....	106	15†	41	29	52	0.05	.....	0.05	0.0	1	24	6	0	w.	W. H. Duncan.
Orland	Glenn	254	27	74.3	− 2.4	101	15†	50	29	41	0.74	+ 0.39	0.24	0.0	4	22	4	4	se.	W. W. Patch.
Orleans	Humboldt	520	6	73.2	.....	110	4†	44	18†	....	1.40	.....	.....	.....	.....	.....	.....	.....	.....	Fred T. Hale.
Oroville (near)	Butte	250	25	73.5	− 0.3	102	16	50	30	42	0.85	+ 0.17	0.40	0.0	3	21	2	7	.....	E. D. Fairchild.
Palermo	.....do.....	213	18	72.0	+ 2.0	103	16	45	30	50	0.75	− 0.05	0.38	0.0	3	21	5	4	s.	Miss Hettie Boalt.
Palm Springs **	Riverside	584	20	82.9	− 2.3	105	22	70	13†	....	0.10	+ 0.06	0.06	0.0	2	24	4	2	.....	Agent, So. Pac. Co.
Pasadena	Los Angeles	827	19	69.8	+ 0.2	104	16	42	29	46	0.08	− 0.07	0.08	0.0	1	27	2	1	sw.	E. R. Sorver.
Paso Robles **	San Luis Obispo	800	22	66.4	− 0.5	105	17	34	20†	63	T.	− 0.17	T.	0.0	0	25	3	2	sw.	Dr. F. W. Sawyer.
Peachland	Sonoma	190	13	64.4	+ 1.2	102	15	40	27	53	1.50	+ 1.14	0.76	0.0	6	18	9	3	sw.	E. H. Parnell.
Penstock Camp	Tuolumne	3,750	2	70.4	.....	95	1	46	28	35	0.10	.....	0.10	0.0	1	14	13	3	se.	Tuolumne W. P. Co.
Pine Crest	Santa Barbara	1,000	11	66.9	− 1.8	102	15	49	29	38	0.25	− 1.17	0.25	0.0	1	23	5	2	sw.	Dr. C. M. Richter.
Placerville	El Dorado	1,875	20	64.8	+ 2.0	90	15†	40	30	40	0.11	− 0.51	0.11	0.0	1	23	2	5	sw.	A. Baring-Gould.
Point Lobos	San Francisco	250	16	60.8	+ 3.2	89	15†	49	4†	33	0.61	+ 0.04	0.28	0.0	3	8	6	16	w.	John Hyslop.
Point Reyes	Marin	490	17	56.2	+ 0.1	83	15	48	3	28	0.87	− 0.05	0.49	0.0	5	10	6	14	nw.	U. S. Weather Bureau.
Porterville	Tulare	464	20	74.3	− 2.0	103	16	48	29	42	0.00	− 0.21	0.00	0.0	0	25	5	0	.....	Harry E. Cowie.
Poway	San Diego	460	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Adams Chapin.
Quincy	Plumas	3,400	14	57.2	+ 0.2	86	15	28	22	53	1.33	0.00	0.60	0.0	0	18	6	6	sw.	L. A. Barrett.
Red Bluff	Tehama	307	32	74.7	+ 0.8	102	14	50	30	36	0.45	− 0.22	0.26	0.0	3	23	4	3	se.	U. S. Weather Bureau.
Redding	Shasta	552	34	75.4	+ 1.4	98	4†	49	30	35	1.00	+ 0.33	0.52	0.0	4	22	5	3	n.	L. F. Bassett.
Redlands	San Bernardino	1,352	16	71.6	− 0.5	102	15	43	29	46	0.06	− 0.31	0.06	0.0	1	25	5	0	w.	Paul W. Moore.
Reedley	Fresno	347	9	73.2	+ 1.1	101	15†	48	20†	44	0.00	.....	0.00	0.0	0	26	4	0	w.	Agent, Santa Fe R. R.
Rialto (near)	San Bernardino	2,250	3	72.2	.....	97	15	46	26†	37	0.00	.....	0.00	0.0	0	24	6	0	sw.	Edison Electric Co.
Riverside	Riverside	851	27	71.1	− 1.0	103	15†	41	29	45	0.00	− 0.13	0.00	0.0	0	25	3	2	w.	C. W. Barton.
Rocklin	Placer	249	38	70.6	− 2.1	98	16†	42	30	46	0.20	+ 0.02	0.26	0.0	1	24	5	1	s.	Agent, So. Pac. Co.
Rohnerville	Humboldt	75	6	57.4	.....	80	14	37	18†	38	0.26	.....	0.14	0.0	2	19	7	4	n.	Dr. R. Calliham.
Sacramento (1)	Sacramento	71	32	69.9	+ 0.8	98	15	47	30	39	0.21	− 0.15	0.13	0.0	3	23	5	2	s.	U. S. Weather Bureau.
Sacramento (2)	.....do.....	35	56	66.9	− 2.6	90	15†	46	30	34	0.24	+ 0.10	0.16	0.0	2	22	4	4	s.	S. H. Gerrish.
St. Helena	Napa	255	1	68.2	.....	103	16	43	19	55	1.12	.....	0.53	0.0	3	.....	.....	.....	.....	B. F. Kettlewell.
Salinas	Monterey	40	35	62.6	+ 1.5	98	15	41	12	45	0.26	+ 0.08	0.26	0.0	1	22	7	1	w.	Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	17	71.5	+ 1.0	104	15	38	29	53	0.00	− 0.12	0.00	0.0	0	24	6	0	sw.	Dr. A. K. Johnson.
San Diego	San Diego	93	38	66.7	− 0.2	100	16	53	29	31	0.02	− 0.04	0.02	0.0	1	21	8	1	nw.	U. S. Weather Bureau.
San Francisco	San Francisco	207	38	61.6	+ 2.3	93	15	50	4	37	0.80	+ 0.53	0.67	0.0	4	15	9	6	w.	Do.
San Jacinto	Riverside	1,550	16	72.4	+ 1.8	103	15	40	29	48	0.00	− 0.14	0.00	0.0	0	28	2	0	w.	E. T. Tanner.
San Jose	Santa Clara	95	34	64.8	+ 0.1	95	15	43	30	46	0.75	+ 0.55	0.75	0.0	2	20	8	2	nw.	U. S. Weather Bureau.
San Leandro	Alameda	48	14	63.0	− 1.1	97	15	40	18†	54	0.84	+ 0.25	0.40	0.0	3	23	2	5	w.	Dr J. E. Childs.
San Luis Obispo	San Luis Obispo	201	14	64.3	− 1.2	102	15	43	28	47	0.02	− 0.10	0.02	0.0	1	15	10	5	nw.	U. S. Weather Bureau.
San Mateo**	San Mateo	22	35	67.4	+ 3.7	94	15	56	18†	....	0.72	+ 0.41	0.49	0.0	3	25	3	2	nw.	Agent, So. Pac. Co.
San Miguel**	San Luis Obispo	616	22	71.5	+ 2.9	98	9†	46	9†	....	T.	− 0.16	T.	0.0	0	18	11	1	.....	Do.
Sanger**	Fresno	371	20	74.3	− 0.9	88	24†	64	15†	....	0.00	− 0.17	0.00	0.0	0	30	0	0	.....	Do.
Santa Barbara	Santa Barbara	130	25	62.1	− 3.6	100	15	45	20	52	0.17	− 0.05	0.10	0.0	7	15	13	2	w.	George W. Russell.
Santa Clara	Santa Clara	90	20	64.9	+ 2.3	99	15	40	30	53	1.02	+ 0.78	0.56	0.0	2	25	0	5	nw.	Santa Clara College.
Santa Cruz	Santa Cruz	20	38	61.4	− 1.7	100	16	41	12	49	1.47	+ 0.95	0.50	0.0	5	16	8	6	s.	W. R. Springer.
Santa Margarita**	San Louis Obispo	996	20	74.5	+ 8.6	100	2	55	30	....	0.00	− 0.34	0.00	0.0	0	.....	.....	.....	.....	Agent, So. Pac. Co.
Santa Maria	Santa Barbara	220	21	64.1	+ 0.1	95	15	46	21	42	0.00	− 0.20	0.00	0.0	0	.....	.....	.....	.....	L. E. Blochman.
Santa Monica	Los Angeles	110	24	63.0	− 4.8	99	16	46	19†	33	0.00	− 0.12	0.00	0.0	0	16	7	7	w.	N. D. Ingham.
Santa Rosa	Sonoma	181	20	64.6	+ 0.4	101	15†	41	30	54	1.29	+ 0.89	0.68	0.0	3	22	4	4	sw.	M. L. McDonald, jr.
Selma**	Fresno	311	23	72.6	− 4.8	96	15	55	30	....	0.00	− 0.19	0.00	0.0	0	25	5	0	nw.	Agent, So. Pac. Co.
Shasta	Shasta	1,049	13	74.5	− 0.7	109	15	42	29	47	1.96	+ 0.80	1.35	0.0	2	21	4	5	nw.	Dr. T. J. Edgecomb.
Sierra Madre	Los Angeles	1,400	12	71.1	+ 1.1	101	15†	49	29	34	0.16	− 0.25	0.16	0.0	1	26	2	2	s.	Miss A. E. Carter.
Sisson	Siskiyou	3,555	20	59.6	+ 1.5	88	15	28	29	51	0.85	0.00	0.53	0.0	3	23	2	5	n.	Agent, So. Pac. Co.
Soledad**	Monterey	188	35	72.0	.....	93	14†	60	10†	....	0.00	.....	.....	.....	.....	.....	.....	.....	.....	Do.
S. E. Farallon	San Francisco	30	6	54.5	− 1.8	71	12	47	13	19	0.70	.....	0.46	0.0	7	11	6	13	nw.	U. S. Weather Bureau.
Sonora	Tuolumne	1,825	21	69.2	.....	93	9†	45	30	37	T.	− 0.73	T.	0.0	0	23	6	1	w.	Charles P. Jones.
Stirling City	Butte	3,525	5	63.6	.....	89	1†	37	30	39	2.10	+ 1.75	1.00	0.0	3	24	4	2	se.	Agent, Butte Co. R. R.
Stockton (1)	San Joaquin	23	38	68.8	− 0.2	96	15	47	30	36	0.07	− 0.07	0.07	0.0	1	22	7	1	nw.	State Hospital.
Storey	Madera	296	9	70.9	− 0.4	102	15	40	24†	52	0.00	.....	0.00	0.0	0	27	2	1	nw.	Agent, Santa Fe R. R.
Suisun**	Solana	20	29	70.6	+ 0.8	98	13	55	29	....	0.53	+ 0.20	0.34	0.0	3	25	0	5	sw.	Agent, So. Pac. Co.
Summerdale	Mariposa	5,270	13	63.6	+ 3.6	84	7†	40	30	32	0.04	− 1.31	0.03	0.0	2	18	5	7	s.	J. H. Lowry.
Summit	Placer	7,017	36	57.3	+ 3.6	88	15	31	30	44	0.72	+ 0.50	0.24	0.0	4	21	5	4	sw.	Agent, So. Pac. Co.
Susanville	Lassen	4,175	20	57.8	− 3.8	84	5†	28	22	40	0.46	− 0.28	0.11	0.0	8	14	16	0	sw.	J. Branham.
Tamarack	Alpine	8,000	3	50.6	.....	78	4	30	26†	40	0.33	.....	0.15	0.0	1	21	2	7	sw.	William Bennett.
Tehachapi**	Kern	3,964	32	67.4	+ 1.3	85	8	48	25†	....	0.00	− 0.09	0.00	0.0	0	.....	.....	.....	.....	Agent, So. Pac. Co.
Tehama**	Tehama	220	38	72.0	− 2.3	96	5	49	15	....	0.60	+ 0.34	0.47	0.0	2	22	1	7	s.	Do.
Towle	Placer	3,704	23	61.5	− 2.4	89	15†	35	26†	49	0.62	− 0.41	0.30	0.0	3	25	0	5	s.	Do.

TABLE 1.—*Climatological data for September, 1909. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Cont'd.																				
Tracy**	San Joaquin	64	29	80.2	+ 8.2	100	21	57	29	....	0.68	+ 0.49	0.47	0.0	2	23	4	3	ne.	Agent, So. Pac. Co.
Tulare (near)	Tulare	274	15	72.0	+ 0.1	98	17	50	29	40	0.00	− 0.66	0.00	0.0	0	24	1	5	w.	J. T. Bearss.
Ukiah	Mendocino	620	16	67.4	+ 1.7	103	15	38	30	57	0.48	− 0.09	0.33	0.0	3	10	17	3	nw.	Dr. George McCowen.
Upland	San Bernardino	1,750	12	69.8	+ 0.1	101	16	46	26†	42	T.	− 0.26	T.	0.0	0	29	1	0	w.	A. P. Harwood.
Upper Lake	Lake	1,350	24	69.1	+ 2.0	96	4†	40	30	45	0.95	+ 0.54	0.38	0.0	3	25	1	4	nw.	C. M. Hammond.
Vacaville	Solano	175	21	70.2	− 1.0	104	16	42	30	52	0.69	+ 0.39	0.33	0.0	4	22	6	2	sw.	G. O. Coburn.
Valley Springs**	Calaveras	673	20																	Agent, So. Pac. Co.
Visalia	Tulare	334	21	77.2	+ 5.8	92	1†	64	4	26	0.00	− 0.52	0.00	0.0	0	25	3	2	nw.	Agent, Santa Fe R. R.
Warner Springs	San Diego	3,165	1	67.7	.....	90	15†	46	28	37	1.41	.....	0.72	0.0	2	....	....	....	....	Mrs. F. S. Sanford.
Wasco	Kern	336	9	70.8	− 2.5	94	11†	47	16	47	0.00	.....	0.00	0.0	0	....	....	....	....	Agent, Santa Fe R. R.
Watsonville	Santa Cruz	23	13	58.2	− 2.1	79	15	43	8	27	0.44	+ 0.28	0.35	0.0	2	8	18	4	w.	Spreckels Sugar Co.
Westley**	Stanislaus	90	20	78.3	+ 4.4	99	9†	60	2†	....	0.00	− 0.23	0.00	0.0	0	27	0	3	n.	Agent, So. Pac. Co.
Wheatland	Yuba	84	22	70.2	− 0.1	96	16	45	30	38	0.40	− 0.11	0.25	0.0	2	21	5	4	s.	Wm. Lumbard.
Willows	Glenn	136	30	71.9	− 3.7	95	16	49	30	37	0.52	+ 0.31	0.34	0.0	4	20	5	5	s.	M. T. Harrington, jr.
Yosemite	Mariposa	3,945	5	62.4	.....	93	3	34	30	50	0.46	.....	0.30	0.0	3	22	5	3	sw.	C. W. Tucker.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of fall not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 11, California.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon.																															
Klamath Agency	Klamath																														
Klamath Falls	do	.05			.02																				.11	.11	.04			.04			0.37
Lakeview	Pitt																														
Long Valley	Pitt		.02				T.																	.03			T.	T.	.01	.05			0.11
Merrill	Interior	.53																								.10	.10						0.73
Yonna	Interior	.25	.12	.48	.09	T.																				.19	.10	.02	.07	.06			1.38
California.																															
Aguanga	Coast					.43																											0.43
Alturas	Sacramento	.03				.08																				.08	.02		.34	.12			0.67
Anderson	do	T.																							T.	.29	.06		T.	.40			0.75
Angels Camp	San Joaquin																													T.			T.
Angiola	do																																0.00
Antioch	do																									.05							0.05
Aptos	Coast																									.12	.52			.21			0.85
Arrowhead Springs	do						.09																		.04								0.13
Auburn	Sacramento																																
Azusa	Coast																								.06								0.06
Bagdad	Desert																																
Bakersfield	San Joaquin																																0.00
Barstow	Desert			.10																													0.10
Bear River	San Joaquin				.09																								.10	.26			0.45
Bear Valley (1)	Sacramento																											.28	.44				0.72
Bear Valley (2)	San Joaquin																																
Beckwith	Sacramento			T.	.41	.26																					.04	.02	.40	.01			1.14
Ben Lomond	Coast																									1.17	.33		.05				1.55
Berkeley	do																									.27	.27			.24			0.78
Big Bar	Sacramento																																
Biggs	do																									.15	.35			.26			0.76
Bishop	Owens																																
Blocksburg	Coast																									1.00				.51			1.51
Blue Canon	Sacramento																									T.		T.	T.	.25	T.		0.25
Blythe	Colorado				.15																						.02	.16					0.63
Boulder Creek	Coast					.01																				.25	.69	.37		.07			1.34
Bowmans Dam	Sacramento																									.04	.02	.20		.47	.02		0.75
Branscomb	Coast																								.03	.62	.08		.30	.59			1.62
Brawley	Desert					.31																				T.		T.					0.31
Brush Creek	Sacramento																								T.	.57	.05	T.	.03	1.08			1.73
Butte Valley	do				T.	T.																				.37	.05	.36		.37			1.15
Calexico	Desert																																0.00
Caliente	San Joaquin																																0.00
Calistoga	Coast																									.55	.25		.42				1.22
Campbell	do																									.69	.06						0.75
Campo	do																																0.00
Camptonville (near)	Sacramento																									11	.02		.15	1.30			1.58
Cedarville	Mountain Lakes	.29				T.	T.																			T.	.35	.30	.03	T.			0.97
Chico	Sacramento																									.61	.10			.15			0.86
Chico (near)	do																									.71			.15				0.86
China Flat	Coast																									.66			.25		.02		0.93
Chino	do																																0.00
Cisco	Sacramento																										.15			.80	.10		1.05
Claremont	Coast																								.03	.02							0.05
Clear Lake	Klamath																										.02			.03			0.05
Cloverdale	Coast																									T.	1.50	.10		.03	.38		2.01
Colfax	Sacramento																													.50	.10		0.60
Colgate	do																											.05	.55	.07			0.67
Colusa	do																									.41	.12			.10			0.63
Corning	do																									.45			.15				0.60
Corona	Coast																																0.00
Crescent City	do																																
Crockers	San Joaquin																											T.	T.				T.
Cuyamaca (1)	Coast					.30																											0.30
Cuyamaca (2)	do					.30																											0.30
Daunt	San Joaquin																																0.00
Davisville	Sacramento																									.43				.12			0.55
Deer Creek	do																											.10	.30	.46			0.86
Delta	do																								T.	.98	.21		.08	.82			2.09
Denair	San Joaquin																																0.00
Descanso	Coast																																
Dinuba	San Joaquin																																0.00
Dobbins	Sacramento																									.04				.62	.01		0.67
Downieville	do																								T.	T.		.07	.13	.50			0.70
Dudleys	San Joaquin																										T.	T.	.12				0.12
Dunnigan	Sacramento																										.45	T.					0.45
Dunsmuir	do																									.55	.50	.10		1.08			2.23
Durham	do																									.60	.05		.25				0.90
Dyerville	Coast																								.25	.23				.29			0.77
Edgewood	Klamath																							.24	.15					.06			0.45
Edison	San Joaquin																																0.00
El Cajon	Coast																																0.00
Electra	San Joaquin																																0.00
Elsinore	Coast																																0.00
Emigrant Gap	Sacramento																									T.			.23	.33			0.56
Escondido	Coast																								.05								0.05
Eureka	do																								.04	.16	T.		.29	.02	.10		0.61
Fairmont	do				T.				.24																								0.24
Farmington	San Joaquin																													T.			T.
Felton	Coast																																
Firebaugh	San Joaquin																																0.00
Folsom	Sacramento																									T.				.12			0.12
Fordyce Dam	do				.15																								T.	.05	.86		1.06
Fort Bragg	Coast																								.68	.52			.60				1.80
Fort Ross	do																																
Fouts Springs	Sacramento																										.16	.08		T.	.29		0.53
Fresno	San Joaquin																																0.00
Fruto	Sacramento																								.10		.25			.10			0.45
Galt	San Joaquin																										T.			.15			0.15
Georgetown	do																													.37			0.37
Gilroy	Coast																										.16						0.16
Glendora	do																																
Glen Ranch	do																																0.00
Glenwood	do																							T.	.18	.75							0.93
Gold Run	Sacramento																									T.		.05	.20	.25	.03		0.53
Gonzales	Coast																										.03	.02					0.05
Grass Valley	Sacramento																								T.	T.	T.			.51			0.51

TABLE 2.—*Daily precipitation for September, 1909. District No. 11*—Continued.

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Greenville	Sacramento				.10	T.																				.07	.14	T.	.17	.37			0.85
Gridley	...do																									.22	.27			.22			0.71
Groveland	San Joaquin																										T.		.09				0.09
Guinda	Sacramento																								.20	.30			.04				0.54
Hanford	San Joaquin																																0.00
Head Dam	Sacramento																													.76			0.76
Healdsburg	Coast																									.27	.38			.69			1.34
Heber	Desert																									T.		T.					T.
Helen Mine	Coast																									1.85	.10			1.02			3.57
Hollister	...do																										.06						0.06
Hornbrook	Klamath																								T.	T.					T.		T.
Hot Springs	San Joaquin																											T.					T.
Hullville (near)	Coast																								.06	.46	.11		.07	.48			1.18
Idyllwild	...do					.25																						.15					0.40
Independence	Owens				T.	T.																						.07					0.07
Indio	Desert																											.18	.94				1.12
Inskip	Sacramento																								T.	1.50		.17	T.	1.37			3.04
Ione	San Joaquin																																0.00
Iowa Hill	Sasramento																										T.	T.	.12	.26			0.38
Isabelle	San Joaquin				.03	.05																											0.09
Jacksonville	...do																										T.	T.	T.				T.
Jamestown	...do																																0.00
Jenny Lind	...do																																0.00
Jolon	Coast																		.01														0.01
Julian	...do																																0.00
Kennedy's Mine	San Joaquin																																0.05
Kennett	Sacramento																										.54						0.54
Kentfield	Coast																								T.	.86	.31			1.24			2.41
Kernville	San Joaquin																																0.00
King City	Coast																																0.00
Knights Landing	Sacramento																									.14	.26			.18			0.58
Knob	...do																										.09		.14	.27	.56		1.06
La Grange	San Joaquin																																0.00
Lakeside	Coast																																
La Porte	Sacramento				T.																				T.	.17	T.	T.	.18	.83			1.18
Lathrop	San Joaquin																										T.			T.			T.
Laurel	Coast																									.25	.60						0.85
Laytonville	...do																									.28	.27		.66		.29		1.50
Le Grand	San Joaquin																																0.00
Lemon Cove	...do																																0.00
Lick Observatory	Coast																																0.00
Livermore	...do																									.47	.15			T.			0.62
Lodi	San Joaquin																									T.				.12			0.12
Lone Pine	Owens				.01																							.35					0.36
Long Camp	San Joaquin																											.10					0.10
Long Valley	Mountain Lakes				T.	T.	.17	T.																				T.	.16				0.33
Lordsburg	Coast																																0.00
Los Alamos	...do																									T.							T.
Los Angeles	...do																								.04								0.04
Los Banos	San Joaquin																																0.00
Los Gatos	Coast																									.55	.60			T.			1.15
Los Vaqueros	...do																								T.	.05							0.05
Lowe Observatory	...do																								.15								0.15
Lyonsville	Sacramento																																
Lytle Creek	Coast																																0.00
Macdoel	Klamath			.01																					T.	.04	.08	.01	T.	.01			0.15
Madeline	Mountain Lakes	T.	T.	.02	.06																					.06	.04	.17					0.35
Magalia	Sacramento																								.52	.76			1.94		.06		3.28
Mammoth Tank	Desert				T.	.04																											0.04
Mariposa	San Joaquin																																
Marysville	Sacramento																									.75							0.75
Mecca	Desert																											.40					0.40
Melones	San Joaquin																																0.00
Menlo Park	Coast																									.18	.94						1.12
Merced	San Joaquin																																0.00
Merced Falls	...do																									T.	T.			T.			T.
Mesa Grande	Coast					T.																											T.
Mill Creek (1)	San Joaquin																												.03	.05			0.08
Mill Creek (2)	Coast					.07																						T.					0.07
Mills College	...do																									.45	.25			.23			0.93
Milo	San Joaquin																																0.00
Milton (near)	...do																												T.				T.
Modesto	...do																																0.00
Mojave	Desert																																0.00
Mokelumne Hill	San Joaquin																											T.		.02			0.02
Mono Ranch	Coast																																0.00
Montague	Klamath	.07																							.05	.25	.08						0.45
Monterey	Coast																										.50	.05		.09			0.64
Monterio	San Joaquin					.10																											0.10
Montgomery Creek	Sacramento																									.68	.26		.29	1.67			2.90
Monumental	Coast																			T.	.04				.74	.37	.56	.20	.50	.70	.35		3.46
Morina Dam	...do																																
Mount Tamalpais	...do																								.04	.81	.09		.14	.08			1.16
Mount St. Helena	...do																										1.46			.71	.20		2.37
Napa (1)	...do																									.37	.15		.33				0.85
Napa (2)	...do																									.21	.30		.24				0.75
Needles	Colorado				.12	.29	.49																					.57					1.47
Nellie	Coast					.17																											0.17
Nevada City	Sacramento																								T.	T.		T.	.08	.47			0.55
Newcastle	...do																																
Newhall	Coast																								.09								0.09
Newman	San Joaquin																																0.00
Nimshew	Sacramento																								.05	1.13	.05			.90	.01		2.14
North Bloomfield	...do																																
North Fork	San Joaquin					T.																											T.
North Lakeport	Coast																									.21			.15				0.36
Oakdale	San Joaquin																																0.00
Oakland	Coast																								T.	.36	.23		T.	.10			0.69
Oakville	...do																									.36	.17		.21				0.74
Ojai Valley	...do																								.05								0.05
Orland	Sacramento																								.24	.20			.15		.15		0.74
Orleans	Klamath																																
Oroville	Sacramento																								.10	.40			.35				0.85
Osena	Coast																																0.00

TABLE 2.—*Daily precipitation for September, 1909. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																															
Palermo	Sacramento																								.32	.05				.38			0.75
Palm Springs	Desert					.06	.05																										0.11
Parkfield	Coast																																0.00
Pasadena	do																								.08								C.08
Pasa Robles	do																										T.						T.
Peachland	do																								.03	.60	.07		.03	.76	.01		1.50
Penstock Camp	San Joaquin																												.10				0.10
Peyton	Sacramento																								.27	.34							0.61
Phoenix Dam	San Joaquin																												.01				0.01
Pilot Creek	Sacramento																																
Pine Crest	Coast																								.25								0.25
Pittville	Sacramento		T.																										.40	.50			0.90
Placerville	do																													.11			0.11
Point Lobos	Coast																								T.	.28	.28		T.	.05			0.61
Point Loma	do	.02							.02	.61	.01			.01																			0.07
Point Reyes	do		T.																						.03	.47	.07		.27	.03			0.87
Pollasky	San Joaquin																																
Porterville	do																																0.00
Poway	Coast																																
Priest Valley	do																									.01							0.01
Quincy	Sacramento					.05	T.																		T.	.11	.39	.03	.15	.60			1.33
Red Bluff	do																									T.	.23	.08		.14	T.		0.45
Redding	do																								.01	.40	.07		T.	.52			1.00
Redlands	Coast																								.06								0.06
Reedley	San Joaquin																																0.00
Represa	Sacramento																													.10			0.10
Rialto (near)	Coast																																0.00
Rio Vista	Sacramento																								.12	.20				.12			0.44
Riverside	Coast																																0.00
Rocklin	Sacramento																									T.				.20			0.20
Rohnerville	Coast																									.14			T.	.12	T.		0.26
Sacramento (1)	Sacramento																									.08		T.	.12	.01			0.21
Sacramento (2)	do																									.08		T.	T.	.16			0.24
Saint Helena	Coast																									.53	.21			.38			1.12
Salinas	do																										.26						0.26
San Bernardino	do																																0.00
San Diego	do	.02																															0.02
San Francisco	do																									.57	.14		.07	.02			0.80
San Jacinto	do																																0.00
San Jose	do																									.69	.06						0.75
San Leandro	do																									.40	.29			.15			0.84
San Luis Obispo	do																								.02	T.							0.02
San Mateo	do																									.19	.49			.04			0.72
San Miguel	do																										T.						T.
San Miguel Island	Ocean																																
Sanger	San Joaquin																																0.00
Santa Ana River	Coast																																T.
Santa Barbara	do	.02				.01		.01	.01		.01			.01											.10								0.17
Santa Clara	do																										.56	.46					1.02
Santa Cruz	do																								.25	.50	.30		.30		.12		1.47
Santa Margarita	do																																0.00
Santa Maria	do																																0.00
Santa Monica	do																																0.00
Santa Rosa	do																								T.	.68	.16			.45			1.29
Sausalito	do																								.49	.20			.10		.12		0.91
Selma	San Joaquin																																0.00
Shasta	Sacramento																								.61	T.				1.35			1.96
Shingle Springs	San Joaquin																													.15			0.15
Sierra Madre	Coast				T.																				.16								0.16
Sisquoc Ranch	do																									T.							T.
Sisson	Sacramento																								.02	.30			.53				0.85
Soledad	Coast																																
S. E. Farallon	Ocean		.01																						.03	.30	.27	.01	.06	.02			0.70
Sonora	San Joaquin																											T.	T.				T.
Spreckels	Coast																									.26	.03						0.29
Stirling City	Sacramento																									.47	.63			1.00			2.10
Stockton (1)	San Joaquin																									T.			T.	.07			0.07
Storey	do																																0.00
Suisun	Sacramento																									.03	.34			.16			0.53
Summerdale	San Joaquin					.01																							.03				0.04
Summit	Sacramento				.22	T.																						.04	.24	.22			0.72
Surrey	Coast									.01														.01									0.02
Susanville	Mountain Lake				.02	.05	.02																				.10	.07	.08	.11	.01		0.46
Tamarack	Sacramento				03																							.05	.10	.15			0.33
Tehachapi	San Joaquin																																0.00
Tehama	Sacramento																									.13				.47			0.60
Three Rivers	San Joaquin																																0.00
Towle	Sacramento																												.30	.25	.07		0.62
Tracy	San Joaquin																									T.		.09		.12	.47		0.68
Tulare	do																																0.00
Tulare (near)	do																																0.00
Tustin (near)	Coast																								.04								0.04
Ukiah	do																								T.	T.	.05		.10	.33			0.48
Upland	do																									T.							T.
Upper Lake	do																								T.	.38	.30		T.	.27			0.95
Upper Mattole	do																									.02	.05			1.60	.40		2.07
Vacaville	Sacramento																								.12	.33			.14		.10		0.69
Valley Springs	San Joaquin																																
Ventura	Coast																																0.00
Visalia	San Joaquin																																0.00
Warner Springs	Coast					.69																						.72					1.41
Wasco	San Joaquin																																0.00
Watsonville	Coast																										.35			.09			0.44
West Branch	Sacramento																								.07	1.15	.11		.04	1.22			2.59
Westley	San Joaquin																																0.00
West Point	do																											T.	.01	.05			0.06
West Saticoy	Coast																																0.00
Wheatland	Sacramento																									.15				.25			0.40
Willows	do																								T.	.34	.06		.01	.11			0.52
Woodleaf	do																								.09	.10	.05	.18		.94			1.26
Yosemite	San Joaquin				T.	.30																						.12	.04				0.46

TABLE 3.—*Maximum and minimum temperatures at selected stations for September, 1909. District No. 11, California.*

Date.	Lakeview, Oreg.		California.																									
			Alturas.		Barstow.		Branscomb.		Brawley.		Colusa.		Eureka.		Fresno.		Independence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porterville.		Red Bluff.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1			82	46	92	62	80	48	97	74	86	55	57	50	88	53	82	57	77	59	56	44	84	45	91	61	84	62
2			77	43	92	54	86	47	101	72	85	53	53	50	91	56	84	50	75	58	70	52	85	45	91	57	91	62
3			85	44	93	63	80	47	104	73	88	54	54	50	93	55	86	51	72	57	81	58	88	46	93	57	98	64
4			85	41	92	61	74	46	100	76	91	57	53	50	96	60	80	56	70	57	82	69	91	48	94	61	101	68
5			84	48	95	57	75	46	91	73	89	54	54	50	97	64	79	54	70	56	80	67	91	48	98	63	94	66
6			84	43	95	58	70	45	95	71	86	54	55	50	95	60	83	56	69	59	75	49	90	49	98	64	92	64
7			85	41	94	58	71	46	98	74	87	54	56	49	94	57	86	54	74	57	77	61	91	47	97	58	90	61
8			88	38	97	61	70	46	102	73	92	58	60	50	98	63	89	56	74	56	84	69	92	46	98	59	96	64
9			90	38	99	62	73	48	105	72	92	60	60	50	101	65	89	58	77	56	81	61	92	48	102	60	96	66
10			81	38	100	60	74	47	105	71	90	57	58	52	97	66	89	54	82	56	77	57	88	50	98	65	90	65
11			69	30	95	65	82	49	102	70	83	62	57	47	87	55	76	54	76	56	77	57	84	43	89	58	84	62
12			77	27	85	57	93	51	97	68	90	63	61	45	92	55	78	46	80	56	80	64	91	45	93	56	92	66
13			84	27	86	46	92	53	96	64	90	60	57	47	96	61	80	46	87	59	86	70	91	44	95	59	95	64
14			89	31	91	49	90	52	100	69	92	57	65	47	98	61	84	45	96	66	87	73	95	44	98	58	102	62
15			91	31	94	54	86	50	104	70	92	58	71	51	101	60	86	50	102	70	93	78	95	45	100	59	100	64
16			89	34	95	56	80	47	102	74	94	56	66	51	101	61	86	50	103	75	92	78	95	47	103	62	98	64
17			82	38	97	56	78	47	103	61	88	56	58	49	100	62	84	51	93	65	82	70	93	45	100	62	89	64
18			81	25	95	59	75	44	103	64	87	54	56	44	96	57	85	53	87	58	82	63	89	42	98	58	92	65
19			80	35	91	56	73	43	101	67	82	52	62	45	94	56	84	50	83	55	72	58	86	43	93	55	88	57
20			73	38	91	52	71	43	100	64	85	54	60	50	90	57	88	49	76	53	71	59	87	43	89	52	89	59
21			66	25	90	55	74	45	100	59	85	58	56	44	88	54	86	56	76	55	79	63	90	39	90	54	83	63
22			75	23	93	59	79	48	98	66	90	63	63	45	91	55	79	48	77	60	79	66	88	45	92	53	93	69
23			87	27	93	48	82	47	99	66	88	58	57	48	97	61	82	47	75	61	70	48	91	44	97	55	92	60
24			84	36	84	56	70	46	99	66	80	54	58	53	77	55	81	48	72	58	50	47	62	41	80	55	69	57
25			65	46	85	48	58	50	90	59	61	55	54	49	75	56	77	46	71	57	51	49	63	49	77	51	61	57
26			75	42	83	47	69	50	95	63	74	56	54	48	78	53	74	48	74	55	61	50	77	44	77	52	78	58
27			78	36	83	53	73	43	93	74	79	54	57	46	84	54	73	54	72	55	61	52	81	45	85	51	83	58
28			61	44	80	58	68	48	93	67	71	55	62	50	76	53	72	49	70	56	52	46	66	44	78	54	69	55
29			55	38	85	44	61	44	94	58	70	54	62	51	79	55	73	40	76	52	56	45	66	47	80	48	69	55
30			66	29	85	50	62	36	97	56	71	48	59	48	77	51	76	41	74	58	59	46	71	35	78	49	72	50
31																												
Mns			78.9	36.1	91.2	55.5	75.6	46.7	98.8	67.5	84.7	56.1	58.6	48.6	90.9	57.7	81.7	50.6	78.7	58.4	73.4	59.0	85.1	44.9	91.7	56.9	87.7	61.7

Date.	California.																									
	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	87	64	77	53	70	60	62	53	76	51	70	53	72	59	73	52	81	46	75	52	78	43	79	52	89	42
2	86	55	82	53	69	62	61	53	74	50	70	54	71	52	70	52	75	50	80	52	74	41	79	48	85	43
3	77	51	87	52	68	64	56	50	74	54	68	52	64	51	73	49	76	49	83	52	74	42	79	48	93	43
4	81	52	87	54	67	63	57	50	75	53	69	51	66	54	71	48	70	48	86	53	76	46	82	48	86	46
5	93	54	84	53	68	60	56	51	75	53	76	51	69	54	74	51	80	47	82	54	74	43	84	50	85	48
6	81	58	79	52	68	60	62	53	75	54	70	52	68	57	68	50	84	46	78	53	74	44	81	49	86	45
7	92	55	85	53	68	61	58	51	73	53	72	53	66	56	71	52	84	44	80	54	78	43	83	48	90	46
8	94	56	94	55	68	61	71	50	84	51	80	52	70	52	88	48	84	43	90	55	79	45	82	47	89	44
9	94	59	92	61	69	60	66	52	89	49	83	48	70	55	87	43	85	45	93	60	81	47	84	46	91	45
10	95	60	84	57	72	60	65	53	79	47	80	49	70	56	88	43	78	36	83	57	79	53	79	43	89	46
11	93	54	83	62	69	58	82	54	87	47	73	50	69	55	93	44	75	46	85	58	68	34	63	33	85	48
12	93	51	90	65	70	55	86	53	91	49	78	49	73	57	93	73	75	46	89	57	71	38	67	32	82	44
13	95	56	92	62	82	55	90	53	92	49	92	45	92	47	95	44	76	46	88	58	79	39	73	36	86	45
14	101	55	95	59	88	62	89	60	93	51	98	52	97	49	97	46	86	42	92	58	84	44	78	40	89	44
15	102	60	98	60	99	68	93	62	95	54	102	65	100	48	101	47	88	43	96	60	88	48	80	40	92	43
16	101	65	96	63	100	72	92	56	91	53	97	58	98	64	101	48	81	42	93	60	83	44	83	43	91	42
17	96	65	87	62	81	66	64	53	82	48	86	50	88	55	89	44	85	34	88	60	78	44	77	42	92	44
18	93	61	89	60	78	64	58	52	81	46	73	50	72	57	80	43	75	40	88	56	77	39	74	34	86	43
19	88	59	82	52	76	58	59	50	75	48	70	49	69	54	73	49	76	42	80	52	76	42	76	43	88	42
20	89	52	86	54	68	55	69	52	80	45	78	48	76	45	89	43	74	45	83	54	73	39	76	43	87	41
21	87	52	84	58	66	60	79	56	86	45	90	51	73	48	95	48	77	39	86	56	76	38	63	32	85	40
22	84	54	89	60	69	60	85	53	91	45	75	48	72	51	96	44	76	38	87	54	79	35	66	28	86	41
23	83	52	81	58	70	64	68	53	76	49	69	54	67	59	72	43	74	44	78	57	79	37	73	34	83	40
24	75	60	67	58	70	63	65	58	71	57	64	56	68	59	64	57	75	45	69	56	73	42	78	41	80	38
25	75	48	62	57	70	60	61	57	61	57	65	59	69	53	61	51	75	40	70	58	55	41	57	48	68	36
26	78	48	74	56	71	55	69	57	71	57	76	55	70	55	74	55	74	43	74	56	68	35	68	44	60	37
27	89	53	77	57	70	58	65	55	72	54	69	50	70	55	72	50	76	44	75	56	59	39	70	42	57	40
28	74	56	69	54	68	59	67	55	71	53	70	43	70	49	67	51	77	39	70	55	58	38	70	42	54	42
29	80	43	72	54	69	53	64	55	69	50	72	48	73	49	70	52	52	28	70	55	56	33	58	42	70	36
30	81	48	70	47	68	56	65	53	70	43	75	53	69	49	70	41	55	34	70	47	64	31	59	30	71	34
31																										
Mns	87.9	55.2	83.1	56.7	73.0	60.4	69.5	53.8	79.2	50.5	77.0	51.6	70.7	53.5	80.5	48.7	76.6	42.5	82.0	55.5	73.7	40.9	74.0	41.6	82.5	42.3

Climatological Data for September, 1909.

DISTRICT No. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

GENERAL CLIMATOLOGICAL CONDITIONS.

The transitional change from summer to winter usually takes place in September the most noticeable feature of which is a gradual increase in the number of days with rain and a corresponding decrease in the number without rain. This change is brought about by the low pressure areas following a track farther south than is the case earlier in the season. The change to the southward of the tracks followed by low pressure areas is a gradual movement and is first observed in British Columbia and a few weeks afterwards in Washington and northern Idaho and finally in Oregon and northern California.

On the 9-10th, 16th and 28th, 29th, 30th disturbances of the winter type moved across Britsih Columbia to Alberta and their influence was felt over a large portion of the Columbia River drainage area, but the centers of these storms were all some distance north of the International Boundary and no low pressure areas of the winter type moved sufficiently far south to include any portion of this district within the central portion of their path.

On sixteen days the weather was controlled by anticyclones and from the 11th until the close of the 23d, except on the 16th, the weather that usually accompanies this type of pressure prevailed. It was during this period that most of the heavy frosts of the month were reported. In the intervals between the high pressure areas small, sluggish depressions, evidently of convectional origin moved irregularly across the district. Electrical storms, local rains, hail and wind rushes were associated with these disturbances and the fact that so little damage was done is almost entirely due to the undeveloped and thinly settled conditions in the localities where they were most violent.

The rains on the 10th instant were sufficiently heavy to either put out or effectually check the forest fires burning prior to that time. These fires were most severe in the four southwestern counties in Oregon. In the Coquille Valley near Myrtlepoint one fire damaged 1,500 acres of timber to the extent of $2,050 according to the estimates of the C. A. Smith Lumber Company who are the owners of most of the land in the burnt area. No information regarding the amount of damage from other fires has been received but it is thought the damage this year by forest fires is much less than usual.

TEMPERATURE.

The temperatures averaged generally above normal and the were but few localities where it was below the seasonal average. The first ten days were the warmest, and the coolest weather generally occurred between the 18th and the 24th. The highest mean temperatures were experienced in the bottom lands along the Columbia River from the mouth of the Okanogan River in the north central portion of Washington to the mouth of the Deschutes River in Oregon. Over this narrow strip the mean temperatures ranged between 65° and 70°. The coolest sections were at the headwaters of the Snake River in Wyoming and at the headwaters of the Missoula River in Montana where the mean temperature was between 48° and 55°. Over the greater part of the area under consideration the mean temperature ranged between 55° and 65° being coolest near the immediate coast and at high elevations and warmest in valleys having a low or moderate elevation.

The highest mean temperature was 69.9° at Blalock, Gilliam County, Oreg., in the Columbia River watershed and the lowest mean temperature was 47.8° at Snake River, Yellowstone Park, Wyo. The elevation of Snake River is 7,000 feet and of Blalock, 237 feet. The highest temperature was 105° at Fairview, Coos County, Oreg., on the 15th, and the lowest was 9° at McCall, Boise County, Idaho, on the 22d.

On the morning of the 18th killing frosts occurred generally throughout the agricultural sections east of the Cascade Mountains, but the damage was nominal owing to the season being so far advanced. Following this date heavy to killing frosts were frequent until the 24th in nearly all localities except in the Williamette Valley and along the immediate coast where no frost sufficiently heavy to injure the staple crops had formed up to the close of the month.

PRECIPITATION.

The rainfall averaged less than usual in nearly all parts of Oregon, Washington, and in the Kootenai, Pend Oreille, Clarks Fork, and Flathead drainage areas; it was above the average in the Snake River drainage area, in Idaho, and Wyoming. In the Columbia River Basin in Washington and Oregon, and in the Puget Sound drainage area, the month was so dry that the supply of water became exhausted in a number of wells, small creeks, and reservoirs; while over the Snake River drainage area in Idaho and Wyoming the rainfall was in some places three or four times as much as the usual amount. The number of rainy days in Idaho was reported to be the greatest on record. There was not a day that rain did not fall some where, but the only dates when precipitation was general were the 10th and the last three days of the month.

Most of the rain that fell was local in character, and generally associated with thunderstorms in mountainous sections. Some of these thunderstorms were very severe, especially those that occurred in the Snake River Valley between the 2d and the 6th. On the 1st a very heavy rain fell on the hills back of Grandview in Owyhee County, Idaho. Gulches in that locality which ordinarily are dry, and had never been known to carry more than 18 inches of water, were filled to a depth of 6 or 7 feet, and the Grandview Canal was seriously damaged. Only 0.40 of an inch of rain fell at Grandview, but it is believed that within a mile and a half of that place the total rainfall was several inches.

On the 2d a heavy shower began in the Shoo-fly region, 12 miles southeast of Grandview, Idaho, and passed from there to Garnet, Idaho, in the southwest corner of Elmore County. The Grandview Canal was still further injured by this storm, making the total damage to the canal by the two storms about $5,000. At Garnet a part of the well-known Hall orchard was washed out and the cellar of the dwelling house was filled so deep with water that some of the contents were washed into the river. This storm came during a break in the record kept at Garnet caused by a change in observers, therefore the amount of rainfall is unknown.

On this day a heavy rain and hailstorm occurred in the vicinity of Burley and Heyburn, small towns about 150 miles farther up the Snake River. At Burley the streets and cellars were flooded, and some merchandise was damaged in the stores. The most serious feature of this storm, however, was the hail which fell in such large quantities that it had not all melted by the next morning. Some of the hailstones were one and one-half inches in diameter, and hundreds of acres of standing grain in the surrounding farming country was badly injured. Also on this day, the 2d, a storm passed down the Burnt River Valley in Baker Couty, Oreg., which caused a flood in that stream sufficiently high to wash away a few small bridges. The rainfall was heaviest near the mouth of Burnt River between Durkee and a small siding a few miles west of that station. At this place several hundred feet of railroad track were

washed away, and passenger trains were delayed fifteen hours before the necessary reparis could be made. No record of rainfall is kept at Durkee, but at Unity, near the head of Burnt River, 1.82 inches of rain fell between 2:50 and 4 p. m.

On the 3d a heavy rain fell in the vicinity of Juliaetta in Latah County, Idaho, which washed out several hundred feet of the track of the Northern Pacific Railway. No record of the rainfall is kept at Juliaetta, but it is said that the water came down one of the gulches in a wall several feet high. On this day in Baker City, Oreg., 0.55 of an inch of rain fell between 1:57 and 2:17 p. m., which is at the rate of 1.65 inches an hour. The winds attending this storm were light, but the electrical display was brilliant, and the city light and power plant suffered some damage from lightning.

On the 5th a thunderstorm moved mortheastward from some place to the west of Baker City in Baker County, Oreg., to Cornucopia in the same county for a distance of 40 or 50 miles. The center of the storm did not pass over Baker City, and the rainfall measured there on that day does not give an adequate idea of the intensity of the rainfall along the track of this storm. At Cornucopia, 1.02 inches of rain fell between 11 a. m. and 1.40 p. m., and the observer writes that at a little distance from his station the rainfall was so heavy as to be called a cloudburst. In this neighborhood, canyons that had been dry for years were suddenly filled with water, and many bridges between Cornucopia and Carson on Pine Creek were washed away. A few houses were struck by lightning, and the track of the new railroad on Snake was covered by a mud slide that took thirty-six hours to remove.

The rains of the 28th and 29th were very beneficial, as they were the first rains of consequence since spring over a large strip of farming country near the eastern base of the Cascade Mountains in Oregon.

On and after the 10th, snow occasionally fell at the elevated stations at the headwaters of the Snake River in Wyoming and at the heads of the streams flowing into the Columbia River in Montana. No snow fell in the lower valleys.

The greatest monthly rainfall was 6.39 inches at Goat Lake, Snohomish County, Wash., and there were two stations in Oregon, viz: Telocaset and Beaver Creek, that reported no rainfall during the month. The greatest rainfall in twenty-four hours was 2.28 inches at Hat Creek, Mont., and the 2d-3d. Other heavy twenty-four-hour falls were 2.10 inches at Edie, Idaho; 2.05 inches at Pompeii, Oreg.; 1.92 inches at Goat Lake Wash.; 1.90 inches at Lake Keechelus, Wash.; 1.65 inches at Mountain Park, Oreg., and 1.31 inches at Glenora, Oreg.

RIVER CONDITIONS.

The well-distributed rains at the headwaters of the tributaries of the Columbia River in Montana, and at the headwaters of the Snake River in Wyoming, combined with the diminished evaporation due to an excess of cloudiness, had the effect of keeping the rivers at a slightly higher stage than usual in those States, and also in Idaho, but in Washington and Oregon, where there was a deficiency in rainfall, the stages of the principal rivers were slightly below normal. At Bonners Ferry, Idaho, the mean stage was 2.8 feet above the average for the last five years; the Pend Oreille River at Newport, Wash., maintained a stage of 0.4 of a foot above the average for the last five years, and the Snake River at Weiser, Idaho, averaged 00.7 of a foot above the mean for a similar period. The Columbia River from Wenatchee to tide water was between a foot and a foot and a half below the average obtained from records extending back about ten years.

On the Snake River at Weiser, the highest water occurred on the 30th, and the lowest on the 1st, but in the lower portion of the Columbia River the highest water was on the 1st and the lowest on the 30th, thus showing a slow but gradual decline in the main portion of the stream during the entire month.

MISCELLANEOUS.

On the 20th dust storms were reported in portions of Morrow and Umatilla counties in Oregon, and high winds occurred in a few localities on the 10th, 16th, 17th, 20th, 25th, and 28th, both in Oregon and in Washington. The winds on the 16th were general over a large area, and those on the 28th were strongest along the coast; a maximum velocity of 68 miles from the southeast having been reported on that day at North Head, Wash.

There were no foggy days east of the Cascade Mountains, and but few to the west of that range.

TABLE 1.—*Climatological data for September, 1909. District No. 12, Columbia Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of part'ly cloudy days.	Number of cloudy days.		
Montana.																				
Anaconda	Deer Lodge	5,300	8	54.4	.....	70	28	29	23	39	2.35	.....	.....	T.	....	10	7	13	.....	C. D. Demond.
Bison Mountain	Powell	7,240									3.81		1.29	1.8	11	15	10	5	.....	C. H. Anderson.
Columbia Falls	Flathead	3,100	13	57.4	+ 4.1	88	6	26	19†	52	3.47	+ 1.20	0.87	0.0	7	7	12	11	sw.	Mrs. I. M. Kennedy.
Como	Ravalli		2	54.0	.....	80	16	30	23	38	2.20	.....	0.70	0.0	9	....	....	....	.....	Hiram Platt.
Darby	....do	3,825	...	.....	.....	.....	.....	.....	.....	.....	2.52	.....	0.85	0.0	6	11	7	12	.....	W. A. Kerlee.
Dayton	Flathead	2,800																	.....	Charles M. Lawson.
East Anaconda	Deer Lodge	5,500	4	53.8	.....	80	24†	32	21	43	1.90	.....	0.55	0.2	8	10	7	13	.....	C. D. Demond.
Fortine	Flathead	2,975	4	54.7	.....	87	7	21	23	51	0.97	.....	0.60	0.0	7	17	2	11	sw.	Mike Petery.
Hamilton	Ravalli	3,575	7	57.4[c]	.....	83[f]	8	32	23	35[f]	1.99	.....	0.40	0.0	8	13	13	4	n.	J. B. Currie.
Hat Creek	Powell	6,000	...	.....	.....	.....	.....	.....	.....	.....	5.59	.....	2.28	0.0	11	16	8	6	w.	M. K. Landreth.
Jocko	Missoula	3,100	1											0.0					.....	George W. Robbins.
Kalispell	Flathead	2,965	11	55.2	+ 1.7	83	5	30	23	41	1.21	− 0.34	0.64	0.0	8	12	9	9	w.	U. S. Weather Bureau.
Lost Creek	Deer Lodge	5,200																	.....	Frank Henault.
Missoula	Missoula	3,225	26	57.1	+ 1.3	87	9	30	23	45	2.38	+ 1.18	0.80	0.0	10	13	6	11	.....	U. S. Weather Bureau.
Ophir	Powell	8,800									2.89		1.20	0.0	7	13	5	12	w.	E. S. Wilton.
Ovando	....do	4,207	11	49.0[b]	− 1.6	73[b]	26	25[b]	23	43[b]	1.88	+ 0.46	0.45	0.0	9	2[b]	22	4	w.	S. B. Muchmore.
Philipsburg	Granite	5,275	6	54.5[a]	.....	82[a]	9	25[a]	23	47[a]	2.90	.....	1.36	T.	9	12	4	14	n.	Prof. G. T. Bramble.
Pipestone Pass	Jefferson	7,000																	.....	Mrs. Th. Kiermeyer.
Plains	Sanders	2,475	11	57.1	+ 1.1	85	7†	32	23	43	2.16	+ 0.72	0.73	0.0	6	15	0	15	sw.	M. H. Pierce.
Pleasant Valley	Flathead	3,500	3	51.8	.....	86	1	20	18	59	1.17	.....	0.43	0.0	6	....	....	....	.....	A. D. Stillman.
Polson	....do	2,920	2	57.6	.....	85	8	33	24	40	2.32	.....	0.90	0.0	6	....	....	....	.....	F. P. Brown.
St. Ignatius	Missoula	2,700	1	57.3	.....	87	9†	31	23	48	1.93	.....	0.68	0.0	12	15	1	14	.....	U. S. Reclamation Service
St. Regis	....do	2,650	2	55.8	.....	89	16	28	23	58	1.22	.....	0.68	0.0	5	10	15	5	ne.	R. D. Lee.
Saltese	....do	3,600	5	.....	.....	.....	.....	.....	.....	.....	2.72	.....	1.10	0.0	4	21	2	7	w.	E. K. Tarbox.
Snowshoe	Flathead	4,500	3																.....	J. S. Riter.
Troy	....do	1,880	15	59.6	+ 4.6	100	5	30	19	60	1.60	− 0.13	0.85	0.0	4	18	3	9	w.	W. E. Milnor.
Upper Lake McDonald	....do	3,200	3	.....	.....	.....	.....	.....	.....	.....	2.40	.....	1.72	0.0	3	....	....	....	.....	F. F. Liebig.
Woodville	Jefferson	6,376	...	.....	.....	.....	.....	.....	.....	.....	2.84	.....	0.74	0.0	13	6	12	12	sw.	Anna Kinman.
Wyoming.																				
Afton	Uinta	6,200	6																.....	A. V. Call.
Alta	....do		...	50.6	.....	77	27	18	18	46	2.79	.....	0.70	2.0	13	8	8	14	sw.	Mrs. Lucy Brown.
Bedford	....do	5,900	10																.....	C. G. Heizer.
Snake River	Yellowstone Park	7,000	3	47.8	.....	74	27	20	24	48	2.80	.....	0.70	7.0	7	7	12	11	s.	U. S. Army.
Nevada.																				
San Jacinto	Elko	.....	5	48.8	.....	79	1	21	30	39	0.93	.....	0.48	0.0	3	12	8	10	se.	Moses Jones.
Idaho.																				
Albion	Cassia	.....	9	56.4	.....	86	15	23	23	52	1.24	+ 0.50	0.39	0.0	7	12	14	4	w.	G. A. Asline.
Almo	....do	.....	...	.....	.....	.....	.....	.....	.....	.....	0.86	.....	0.30	0.0	5	16	9	5	nw.	Wm. L. Eames.
Bear Valley	Boise																		.....	Francis Wallis.
Blackfoot	Bingham	4,503	13	58.1	+ 0.5	85	25	23	22	49	1.70	+ 1.18	0.60	T.	10	12	14	4	sw.	E. A. Dowd.
Blanche	Lincoln		...	61.7	.....	94	9†	29	24	54	1.15	.....	0.65	0.0	2	....	....	....	.....	Solon A. Bray.
Bogus Creek	Boise	4,200																	.....	F. P. Ingraham.
Boise	Ada	2,770	24	63.1	+ 1.6	91	9	36	22	38	0.51	+ 0.10	0.11	0.0	8	12	12	6	nw.	U. S. Weather Bureau.
Bonanza	Custer	6,600																	.....	Mrs. Emma Walter.
Bonners Ferry	Bonner	1,850	3	59.8	.....	97	9	20	23	49	1.41	.....	0.81	0.0	4	14	12	4	sw.	W. H. Heideman.
Boulder Mine	Boise	4,800									2.50		0.65	1.0	9	11	16	3	.....	Patrick Moriarty.
Buhl	Lincoln	3,800	4	62.5	.....	92	3	35	21†	42	1.52	.....	0.72	0.0	4	25	2	3	w.	Dr. D. P. Albee.
Burke	Shoshone	4,082	3	52.2	.....	82	6†	28	18†	44	3.21	.....	1.70	T.	9	11	11	8	sw.	W. A. Hall.
Caldwell	Canyon	2,372	5	62.2	.....	93	9	29	22	50	1.17	.....	0.40	0.0	6	15	7	8	e.	W. J. Boone.
Camas	Fremont	4,815	...	56.0[b]	.....	81[b]	16†	21[b]	21	52[b]	3.27	.....	1.02	0.0	11	....	....	....	sw.	Ednah Faulkner.
Cambridge	Washington	2,651	14	61.0	+ 0.7	92	9	26	22	55	0.68	+ 0.04	0.20	0.0	7	....	....	....	.....	C. H. Shepherd.
Chesterfield	Bannock	5,424	13	55.5	+ 4.3	87	17	19	23	51	1.83	+ 1.35	0.56	0.0	11	11	9	10	.....	Chas. L. West.
Clawson	Fremont										3.30		0.70	0.0	12	12	9	9	.....	E. J. Hopkins.
Cœur d'Alene	Kootenai	2,157	17	60.1[d]	+ 3.8	85[d]	6	34[d]	23	41[d]	0.60	− 0.84	0.60	0.0	1	....	....	....	.....	Jas. T. Scott.
Culdesac	Nez Perce	1,520	...	63.6	.....	90	5†	39	12†	49	1.52	.....	0.46	0.0	4	17	7	6	.....	R. R. Richmond.
Dent	....do	1,350	4	62.2	.....	95	9	36	24	46	3.03	.....	0.72	0.0	8	15	10	5	.....	Emil Schuessler.
Driggs	Fremont	6,097	3	51.0	.....	75	25†	22	18	45	3.00	.....	0.62	T.	10	9	6	15	sw.	Walter H. Durrant.
Edie	....do			51.8	.....	72	25	24	23	44	3.47	.....	2.10	0.0	8	19	9	2	s.	Geo. B. Edie.
Emmett	Canyon	2,350	3	65.0	.....	95	9	34	22	44	1.77	.....	1.00	0.0	4	19	4	7	w.	E. L. Marvin.
Forney	Lemhi		13	52.6	+ 1.3	87	28	20	22	53	3.19	+ 2.18	0.50	0.5	13	10	6	14	sw.	E. P. Treloar.
Garnet	Elmore	2,575	10	65.7[f]	− 0.6	95[f]	16	42[f]	30	45[f]	.....	.....	.....	0.0	....	....	....	....	e.	Mrs. Inez H. Davis.
Gilbert	Nez Perce	3,030	...	57.8	.....	84	16	32	23	36	3.30	.....	1.10	0.0	8	15	8	12	nw.	J. B. Loomis.
Glenns Ferry	Elmore	2,569	2	64.2	.....	96	9	28	22†	57	1.24	.....	0.60	0.0	4	20	7	3	nw.	I. E. Perkins.
Grand Forks	Shoshone	3,000	....	52.9	.....	89	7	27	16	60	3.42	.....	1.30	0.0	11	....	....	....	n.	H. F. Kottkey.
Grandview	Owyhee					92[e]	9†	29[a]	23	51[a]	0.98	.....	0.40	0.0	5	15	11	4	nw.	N. G. Massey.
Guffey	....do	2,381	....	67.2	.....	97	9†	35	22	46	0.62	.....	0.23	0.0	8	21	0	9	w.	F. N. Perry.
Hailey	Blaine	5,347	7	54.8	.....	81	15	19	21	48	1.61	.....	0.90	0.0	6	11	13	6	sw.	U. S. Forest Service.
Henry	Bannock			51.6	.....	78	2†	19	22	49	2.61	.....	0.66	0.0	12	9	15	6	w.	N. W. Irsfield.
Hotspring	Owyhee	2,752	4	63.8	.....	90	16	35	23†	45	1.08	.....	0.60	0.0	3	....	....	....	.....	J. M. Waterhouse.
Idaho City	Boise	4,000	11								2.25		0.75	0.0	5				.....	Mrs. Emma Hammer.
Idaho Falls	Bingham	4,742	14	56.5	− 0.3	81	25	25	22	50	2.78	+ 2.00	0.72	0.0	11	15	6	9	ne.	Dr. T. M. Bridges.
Indian Valley	Washington	2,999	...	.....	.....	.....	.....	.....	.....	.....	0.72	.....	0.37	0.0	3	22	1	7	n.	W. E. Henke.
Irwin	Bingham	6,500	...	54.6	.....	82	25	22	22	50	4.09	.....	1.10	0.0	10	7	16	7	.....	Miss Martha A. Beam.
Kellogg	Shoshone	2,330	5	57.4	.....	90	6†	29	23	56	2.65	.....	1.98	0.0	7	16	13	1	sw.	W. McM. Huff.
Kooskia	Idaho	1,261	...	63.6	.....	99	25	32	25	67	2.57	.....	1.15	0.0	9	11	4	15	w.	U. S. Forest Service.
Lake	Fremont	6,700	17	51.8	+ 2.6	74	28†	26	16	40	1.75	+ 0.87	0.50	0.0	4	....	....	....	sw.	J. Sherwood.
Lakeview	Bonner	2,250	12	58.2	+ 2.1	84	16	35	19†	43	1.55	− 0.19	0.80	0.0	4	15	0	15	sw.	E. D. Faust.
Landore	Washington	5,300	6	52.5	.....	80	9	25	18	42	3.55	.....	0.65	T.	9	12	13	5	.....	Mrs. Emma L. Brown.
Lardo	Boise	5,050	5																.....	E. W. York.
Lewiston	Nez Perce	757	15	65.5	+ 2.0	93	7	41	22	40	1.43	+ 0.78	0.64	0.0	7	10	8	12	e.	U. S. Weather Bureau.
Little Camas	Elmore	5,000									2.52	.....	0.81	0.0	8	9	7	14	w.	Solon McCoy.
Lost River	Blaine	5,700	15																.....	B. B. Harger.
Lowry	Owyhee		2																.....	W. D. Winter.
Mackay	Custer	5,897	2	54.4	.....	77	16	26	22	39	2.70	.....	0.65	0.0	8	17	7	6	nw.	U. S. Forest Service.
Meadows	Washington	3,950	7	55.8	.....	87	9	20	22	55	1.40	.....	0.37	0.0	10	11	13	6	.....	Chas. A. Hackney.
Milner	Twin Falls	4,097	6	59.2	.....	88	9†	30	22	46	0.06	.....	0.03	0.0	3	20	8	2	w.	R. A. Hanson.
Moscow	Latah	2,748	17	60.2	+ 2.9	89	17	34	22	45	1.54	+ 0.25	0.50	0.0	8	16	5	9	e.	University of Idaho.
Mountainhome	Elmore	3,150	4	61.4	.....	94	16	25	22	55	0.62	.....	0.28	0.0	4	14	9	7	nw.	Mrs. Ellen Marion.
Murtaugh	Twin Falls	.....	3	58.4	.....	86[b]	16	26	23	52[b]	1.36	.....	0.60	0.0	4	15	13	2	w.	J. E. Steinour.
Nez Perce	Nez Perce	3,182	...	55.8	.....	82	6	29[a]	22	41[a]	2.65	.....	1.20	0.0	5	20	0	10	.....	P. W. Mitchell.
Oakley	Casia	4,191	17	58.1	− 1.1	85	10†	30	22	47	2.05	+ 1.27	0.65	0.0	8	13	15	2	n.	John Adams.
Orofino	Nez Perce	1,027	5	62.2	.....	96	1	33	23	47	3.37	.....	0.73	0.0	8	15	11	4	.....	Geo. Alteneder.
Payette	Canyon	2,159	16	62.3	+ 0.4	94	9	27	22	54	0.99	+ 0.43	0.46	0.0	7	12	10	8	s.	E. F. Allen.
Pebble	Bannock	5,277	....	53.6	.....	79	28	19	22	47	2.70	.....	1.23	0.0	....	....	....	....	sw.	Arthur P. Say.
Pierson	Custer	7,000									2.02	.....	1.00	0.0	5	16	0	14	.....	David P. Clarke.
Pleasant Valley	Ada	3,000	2	62.4	.....	99	8	26	18	51	0.27	.....	0.18	0.0	4	21	6	3	se.	C. E. Friedrich.
Pocatello	Bannock	4,483	11	59.4	+ 1.3	83	25	30	22	35	2.47	+ 1.59	0.57	0.0	10	10	12	8	se.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for September, 1909. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of part'ly cloudy days.	Number of cloudy days.		
Idaho—Cont'd.																				
Pocatello Nursery	Bannock	5,396	3	55.1	.....	82	25	23	22	48	3.69	.....	1.52	0.0	10	14	16	0	sw.	Peter F. Wrensted.
Poplar	Bingham	.....	...	55.6	.....	82	25	22	18	48	3.59	.....	0.68	0.0	14	10	12	8	nw.	Stuart Lee.
Poplars	Canyon	2,425	10	.....	.....	.....	.....	.....	.....	.....	1.60	+ 1.10	.....	0.0	6	.....	.....	.....	.....	N. S. Dils.
Porthill	Bonner	1,665	17	56.2	+ 2.3	83	9	32	23	40	1.27	− 0.67	0.60	0.0	5	23	1	6	.....	H. A. French.
Pyle Creek	Boise	3,100	...	.....	.....	.....	.....	.....	.....	.....	2.16	.....	0.85	0.0	6	14	7	9	ne.	Walter L. Cole.
Rupert	Lincoln	4,204	3	60.3	.....	86	25	30	23	45	2.35	.....	0.88	0.0	9	20	6	4	w.	Will Parry.
St. Maries	Kootenai	2,263	13	59.1	+ 1.7	90	16	30	18†	49	1.56	+ 0.09	0.82	T.	6	15	2	13	sw.	J. S. Turnbull.
Salem	Fremont	5,000	5	.....	.....	.....	.....	.....	.....	.....	3.18	.....	0.74	0.0	11	.....	.....	.....	sw.	Geo. H. A. Harris.
Salmon	Lemhi	4,040	4	56.9	.....	82	26	26	18	47	1.85	.....	0.41	0.0	14	15	7	8	w.	E. K. Abbott.
Salmon River Dam	Twin Falls	.....	2	59.8	.....	85	9†	30	22	41	1.37	.....	0.37	T.	7	17	6	7	nw.	Arch M. Gilbert.
Sheep Hill	Boise	5,000	...	.....	.....	.....	.....	.....	.....	.....	2.60	.....	0.66	0.0	13	.....	.....	.....	.....	Clifford M. Gardner.
Shoshone	Owyhee	6,200	3	59.5	.....	85	25	27	22	39	0.65	.....	0.28	0.0	5	8	22	0	w.	O. A. Petitt.
Silver City	Lincoln	3,968	...	.....	.....	.....	.....	.....	.....	.....	1.26	.....	0.51	1.0	11	.....	.....	.....	.....	A. O. Treeman.
Soldier	Blaine	5,140	13	55.8	+ 2.0	84	1	20	30	54	1.15	+ 0.61	0.60	0.0	3	16	9	5	nw.	W. W. Leek.
Standrod	Cassia	.....	5	56.6	.....	77	9[b]	32[b]	22†	36[b]	1.77	.....	0.62	0.0	11	19	4	7	s.	T. B. Jones.
Sugar	Fremont	.....	2	54.5	.....	81	25	22	22	48	3.02	.....	0.84	T.	9	14	12	4	sw.	Geo. F. Webb.
Sunnyside	Elmore	.....	...	62.4	.....	93	15	32	18	47	0.81	.....	0.40	0.0	5	21	2	7	nw.	E. A. Wilmot.
Tilden	Bingham	4,420	...	57.2	.....	87	1	20	22	50	1.07	.....	0.40	0.0	5	12	12	6	sw.	Mrs. W. A. Edwards.
Twin Falls	Twin Falls	3,825	4	59.4	.....	92	16	28	23	55	1.54	.....	0.45	0.0	7	15	15	0	w.	Clyde C. Anderson.
Vernon	Fremont	.....	12	54.7	+ 0.1	82	25	22	22	47	3.36	+ 2.40	1.10	T.	9	12	10	8	sw.	A. M. Slatery.
Wallace	Shoshone	2,728	2	57.2	.....	88	6	32	23	47	2.49	.....	0.96	0.0	11	.....	.....	.....	e.	U. S. Weather Bureau.
Warfield	Blaine	6,386	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. H. Warfield.
Wendell	Lincoln	3,400	....	62.6	.....	93	9†	26	22	50	1.02	.....	0.28	0.0	5	15	8	7	w.	Chas. L. Dingler.
Washington.																				
Aberdeen	Chehalis	162	18	57.1	− 0.7	92	4	38	27	42	1.54	− 3.47	0.49	0.0	7	7	23	0	w.	C. Weatherwax.
Anacortes	Skagit	60	15	59.4	.....	81	1†	38	29†	31	1.33	− 0.63	0.34	0.0	10	13	0	17	.....	Douglass Allmond.
Baker	....do....	200	3	.....	.....	96	5	.....	.....	.....	3.48	.....	1.17	0.0	9	15	3	12	.....	Robt. M. White.
Bellingham	Whatcom	60	14	57.1	+ 0.9	81	5	37	27	34	1.72	− 0.93	0.57	0.0	6	15	9	6	.....	Sanford B. Mayhew.
Blaine	....do....	53	12	55.7	+ 1.8	75	2†	33	27	33	1.62	− 2.20	0.52	0.0	8	12	8	10	sw.	G. A. Ruring.
Bremerton	Kitsap	.....	...	.....	.....	.....	.....	.....	.....	.....	0.69	− 1.37	0.32	0.0	6	.....	.....	.....	.....	U. S. Navy Yard.
Cedar River	King	.....	2	.....	.....	.....	.....	.....	.....	.....	2.73	.....	1.04	0.0	7	15	3	12	.....	Geo. Landsburg.
Centralia	Lewis	212	16	59.8	+ 1.4	94	5	34	18†	48	0.98	− 1.71	0.36	0.0	6	11	13	6	w.	I. S. Turner.
Cheney	Spokane	2,351	10	64.3	.....	91	8	25	29†	56	0.27	− 0.72	0.27	0.0	1	14	11	5	sw.	G. A. Fellows.
Chopaka	Okanogan	1,200	1	61.7	.....	95	1†	29	23	52	1.23	.....	0.70	0.0	6	11	4	5	nw.	Mrs. J. S. Myers.
Clearbrook	Whatcom	140	6	56.5	.....	89	4	31	18	43	1.92	.....	1.05	0.0	7	11	8	11	w.	Geo. Gibbs.
Clearwater	Jefferson	135	13	55.2	− 1.8	76	4	38	26	29	4.51	− 1.29	0.85	0.0	11	19	3	6	.....	Alfred Ritchie.
Clealum	Kittitas	1,930	10	57.1	+ 1.7	94	1	26	18	54	2.25	+ 1.30	0.75	0.0	5	18	9	3	se.	J. A. Balmer.
Colfax	Whitman	2,300	20	58.6	+ 2.5	87	10	30	23	51	0.66	− 0.46	0.25	0.0	4	.....	.....	.....	.....	W. H. James.
Colville	Stevens	1,635	9	58.3	+ 1.8	95	1†	27	18	56	1.64	+ 0.82	0.70	0.0	6	16	5	9	sw.	W. L. Sax.
Conconully	Okanogan	2,300	9	60.4	+ 5.1	92	1	33	18	43	1.56	+ 0.49	1.02	0.0	5	17	3	10	s.	Wm. Baines.
Coupeville	Island	150	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. T. Howard.
Crescent	Lincoln	2,250	9	59.6	+ 3.0	90	6	30	23	49	0.52	− 0.47	0.39	0.0	2	21	4	5	sw.	Otto Wollweber.
Davenport	....do....	2,450	...	60.3	.....	87	5	27	22	43	0.59	.....	0.45	0.0	3	25	4	1	sw.	W. H. Reed.
Dayton	Columbia	1,700	23	62.4	+ 3.2	89	16	35	22	39	0.90	− 0.20	0.41	0.0	6	15	9	6	.....	W. W. Hendron.
Detroit	Mason	31	1	60.8	.....	93	4	39	27	42	0.84	.....	0.38	0.0	5	18	7	5	s.	Walter O. Eckert.
Dixie	Walla Walla	5,000	...	.....	.....	.....	.....	.....	.....	.....	1.96	.....	0.69	0.0	5	8	9	13	w.	T. Z. Andrews.
Duckabush	Jefferson	380	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Emery J. Finch.
East Sound	San Juan	500	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Benj. E. Harrison.
Ellensburg	Kittitas	1,571	21	59.0	+ 2.7	95	1	30	23	48	0.56	+ 0.05	0.39	0.0	3	20	6	4	nw.	R. Lee Barnes.
Ephrata	Grant	1,265	6	68.0	.....	97	6	33	30	38	0.30	.....	0.20	0.0	2	17	10	3	.....	D. Chaffee.
Forks	Clallam	480	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. Palmer.
Fort Simcoe	Yakima	1,427	15	66.9	+ 3.5	97	1	39	30	38	0.40	+ 0.01	0.20	0.0	3	19	7	4	.....	Dr. G. A. Landes.
Goat Lake	Snohomish	2,900	...	.....	.....	.....	.....	.....	.....	.....	6.39	.....	1.92	0.0	9	.....	.....	.....	.....	C. M. Mackintosh.
Gold Creek	Yakima	2,600	...	.....	.....	.....	.....	.....	.....	.....	1.00	.....	0.45	0.0	5	19	0	11	.....	John W. Anderson.
Goldendale	Klickitat	1,600	3	62.3	.....	95	6	34	18†	50	0.38	.....	0.28	0.0	3	17	5	8	w.	Klickitat Abstract Co.
Granite Falls	Snohomish	397	6	.....	.....	.....	.....	.....	.....	.....	2.83	− 1.96	0.96	0.0	10	16	3	11	nw.	C. H. Cleaver.
Hatton	Adams	1,100	4	63.8	.....	98	1†	28	18	53	0.49	.....	0.25	0.0	4	16	4	10	sw.	Dr. A. V. Marion.
Huntsville	Columbia	1,400	1	.....	.....	.....	.....	.....	.....	.....	0.68	.....	0.30	0.0	4	21	4	5	.....	Dr. B. Hill.
Irene Mount	Okanogan	3,015	...	.....	.....	.....	.....	.....	.....	.....	1.08	.....	0.49	0.0	4	10	13	7	s.	Mrs. E. W. Wheeler.
Kennewick	Benton	367	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. W. Soth.
Kettle Falls	Stevens	1,265	...	61.4	.....	96	1	33	21†	48	1.69	.....	0.74	0.0	7	19	9	2	.....	Dr. A. E. Baldwin.
Kiona	Benton	430	4	66.0	.....	95	7	35	23	50	0.03	.....	0.03	0.0	1	20	9	1	sw.	Dr. F. S. Hedger.
Kosmos	Lewis	775	3	58.4	.....	97	4	34	18	51	2.17	.....	1.36	0.0	8	1	26	3	ne.	Hon. J. A. Ulsh.
La Center	Clarke	250	12	60.0	+ 1.0	93	4	33	19	43	2.38	− 0.53	0.90	0.0	7	16	7	7	sw.	Joseph Brothers.
La Crosse	Whitman	1,400	...	62.2	.....	92	16	30	18	50	0.71	.....	0.33	0.0	7	19	5	6	sw.	M. E. Schreck.
Lake Clealum	Kittitas	2,171	...	.....	.....	.....	.....	.....	.....	.....	3.68	.....	1.50	0.0	7	17	7	6	nw.	U. S. Reclamation Service
Lake Kachess	....do....	2,235	...	57.8	.....	90	1†	32	18	49	3.77	.....	1.46	0.0	7	12	13	5	s.	Do.
Lake Keechelus	....do....	2,479	1	.....	.....	.....	.....	.....	.....	.....	4.33	.....	1.90	0.0	8	6	3	21	.....	Do.
Lakeside	Chelan	1,116	18	65.8	+ 4.1	95	1†	41	30	36	0.99	+ 0.46	0.79	0.0	3	6	20	4	w.	W. H. Van Meter.
Laurel	Klickitat	1,900	...	.....	.....	.....	.....	.....	.....	.....	0.95	.....	0.40	0.0	4	20	4	6	w.	L. S. Strout.
Lester	King	1,614	5	57.8	.....	94	6	32	18	49	4.05	.....	1.75	0.0	4	16	2	12	w.	W. W. Clabaugh.
Lone Tree	Chealis	9	....	58.0	.....	80	4	47	30	28	0.99	.....	0.30	0.0	13	9	6	15	nw.	U. S. A. Engineers Corps.
Longmire Spring	Pierce	2,800	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Lost Creek	Okanogan	3,125	...	.....	.....	.....	.....	.....	.....	.....	1.24	.....	0.66	0.0	3	20	6	4	sw.	P. H. Leese.
Lucerne	Chelan	1,100	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Barbara Schearer.
Lyle (Pine Hill)	Klickitat	600	16	60.2	− 0.6	99	5	32	14	59	1.07	− 0.03	0.41	0.0	5	11	14	5	e.	Thomas J. Whitcomb.
McCumber's Ranch	Yakima	2,182	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Mary McCumber.
Mottinger	Benton	307	9	68.4	+ 2.4	96	5†	32	16	64	0.16	− 0.46	0.16	0.0	1	27	1	2	w.	G. H. Mottinger.
Mount Pleasant	Skamania	650	9	61.7	+ 1.3	90	4	40	18	38	2.37	− 0.61	0.75	0.0	10	17	6	7	w.	F. M. Grout.
Moxie	Yakima	1,000	17	62.8	+ 3.0	98	6	30	30	53	0.39	− 0.05	0.15	0.0	4	12	12	6	w.	H. B. Scudder.
North Head	Pacific	211	7	55.2	− 1.0	80	4	47	26	28	1.27	− 0.58	0.47	0.0	9	10	4	16	nw.	U. S. Weather Bureau.
Northport	Stevens	1,950	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. L. Hager.
North Yakima	Yakima	1,076	...	63.5	.....	96	1	35	30	41	0.74	.....	0.39	0.0	4	.....	.....	.....	nw.	Albert Bender.
Nutland	Klickitat	.....	...	67.0	.....	95	5	39	18	41	0.29	.....	0.08	0.0	5	.....	.....	.....	.....	J. R. Shepard.
Odessa	Lincoln	1,540	6	62.2	.....	95	5	32	29†	50	0.14	.....	0.14	0.0	1	8	14	8	sw.	Wm. U. Neeley.
Olga	San Juan	50	19	55.4	− 0.2	78	1	40	23†	26	1.59	− 0.81	0.44	0.0	7	14	13	3	nw.	Cecil S. Willis.
Olympia	Thurston	200	31	58.4	+ 1.8	91	4	36	23	43	1.14	− 1.73	0.42	0.0	5	15	10	5	n.	M. O'Conner.
Omak	Okanogan	.....	...	.....	.....	.....	.....	.....	.....	.....	0.39	.....	0.20	0.0	4	18	8	4	s.	Wm. G. Tait.
Oroville	....do....	922	....	65.6	.....	98	6	32	22	49	1.60	.....	0.75	0.0	5	19	5	6	s.	A. M. Dufield.
Peola	Garfield	5,000	...	.....	.....	.....	.....	.....	.....	.....	1.33	.....	0.61	0.0	10	13	9	8	nw.	Samuel Gruell, sr.
Pomeroy	....do....	1,300	17	63.0	+ 1.1	91	5†	40	17†	49	1.00	− 0.14	1.00	0.0	1	20	0	10	w.	Peter McClung.
Port Crescent	Chailam	250	14	51.4	− 1.1	78	4	31	26	34	0.68	− 1.62	0.31	0.0	8	10	13	7	nw.	U. S. Weather Bureau.
Port Townsend	Jefferson	80	19	57.0	− 0.4	80	5	42	27	30	1.09	− 0.11	0.40	0.0	6	17	3	10	w.	Frank Plummer.
Pullman	Whitman.	2,550	17	60.9	+ 2.3	88	9†	29	20	43	0.85	− 0.53	0.30	0.0	4	15	7	8	sw.	State Agricultural Col.
Quimiault	Chehalis	300	2	58.4	.....	89	4	38	27	37	3.97	.....	1.52	0.0	13	13	9	8	w.	A. V. Higley.
Republic	Ferry	2,628	9	57.0	+ 3.0	95	1	27	18†	57	1.24	+ 0.05	0.58	0.0	5	24	0	6	nw.	Geo. B. Stocking.
Rex Creek	Chelan	1,135	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James W. Nicol.

TABLE 1.—*Climatological data for September, 1909. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Washington—Cont'd.																				
Ritzville	Adams	1,825	10	.....	.....	.....	.....	.....	.....	.....	0.20	− 0.34	0.20	0.0	1	.....	.....	.....	.....	Agent, No. Pac. Ry.
Rock Lake	Whitman	1,750	3	62.0[b]	.....	91[b]	5	28[b]	18	46	.....	.....	.....	0.0	...	17[b]	4[b]	7[b]	sw.	P. M. Ramsey.
Rosalia	do	2,425	17	60.6	+ 4.5	88	6	36	23	38	0.22	− 1.00	0.12	0.0	3	19	5	6	sw.	Hans Mumm.
Russell's Ranch	Yakima	2,870	...	.....	.....	.....	.....	.....	.....	.....	0.28	.....	0.10	0.0	5	14[c]	3[c]	8[c]	w.	John Russell.
Seattle (1)	King	123	18	60.1	+ 2.2	84	5	47	18	37	1.10	− 0.83	0.41	0.0	7	11	5	14	n.	U. S. Weather Bureau.
Seattle (2)	do	...	...	60.4	.....	85	5	45	18†	33	1.44	.....	0.67	0.0	9	17	5	8	s.	Univ. of Washington.
Sedro-Wooley	Skagit	38	12	57.8	+ 0.2	89	5	35	14†	42	2.53	− 1.00	0.80	0.0	9	12	10	8	.....	H. L. Devin.
Sixprong	Klickitat	1,240	2	67.3	.....	95	6	39	30	39	0.19	.....	0.11	0.0	3	16	6	8	sw.	C. E. Comstock.
Skagit Power Dam	Whatcom	...	...	60.0	.....	92	2†	42	16†	42	4.80	.....	1.90	0.0	9	12	0	18	.....	Skagit Power Co.
Snohomish	Snohomish	50	15	59.2	+ 2.0	89	5	38	15†	47	1.26	− 1.92	0.35	0.0	8	13	6	11	nw.	Irving B. Vestal.
Snoqualmie Falls	King	667	10	59.0	+ 1.6	89	4†	37	18	48	5.25	+ 2.14	1.47	0.0	9	14	0	16	.....	O. N. Wiswell.
Snyder's Ranch	Okanogan	2,200	...	.....	.....	.....	.....	.....	.....	.....	0.72	.....	0.38	0.0	3	18	10	2	w.	George M. Snyder.
South Bend	Pacific	16	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John L. Stevens.
Spokane	Spokane	1,943	28	61.4	+ 2.6	88	16	36	23	39	0.18	− 0.83	0.07	0.0	6	10	10	10	sw.	U. S. Weather Bureau.
Stehekin	Chelan	1,100	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. E. Field.
Stokes Ranch	Okanogan	2,670	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Amos Stokes.
Sullivan Lake	Stevens	2,700	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Jennie D. McAbee.
Sumner	Pierce	77	1	58.6	.....	90	4	34	5†	49	1.12	.....	0.38	0.0	8	15	4	11	n.	H. E. Thompson.
Sunnyside	Yakima	740	14	63.2	+ 2.6	96	6	31	18	50	0.41	− 0.09	0.33	0.0	4	20	4	6	w.	U. S. Reclamation Service
Tacoma	Pierce	213	23	59.7	+ 2.1	86	4	42	18	33	0.90	− 1.57	0.33	0.0	9	11	9	10	n.	U. S. Weather Bureau.
Tatoosh Island	Clallam	86	24	53.0	0.0	68	23	44	26	21	2.03	− 4.11	0.60	0.0	9	8	9	13	s.	Do.
Tieton	Yakima	2,000	...	60.6	.....	92	1	34	21	38	0.82	.....	0.41	0.0	5	21	1	8	.....	U. S. Reclamation Service
Touchet	Walla Walla	556	2	63.8	.....	94	5†	31	23	54	0.36	.....	0.20	0.0	3	14	5	11	sw.	D. W. Dorrance.
Touchet Ridge	Columbia	2,500	...	.....	.....	.....	.....	.....	.....	.....	1.51	.....	0.42	0.0	5	17	4	9	sw.	R. H. King.
Trinidad	Douglas	900	5	68.4	.....	99	1	39	30	37	0.36	.....	0.32	0.0	3	20	7	3	nw.	J. C. Wheeler.
Twisp	Okanogan	1,619	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. G. Hughes.
Tyee	Chelan	2,000	...	.....	.....	.....	.....	.....	.....	.....	1.38	.....	0.62	0.0	4	11	15	4	w.	Elias McCrea.
Vancouver	Clarke	100	34	62.4	+ 1.5	94	5	37	18	43	1.41	− 0.36	0.36	0.0	7	15	8	7	nw.	A. A. Quarnberg.
Vashon Island	King	110	20	57.9	+ 0.6	79	4†	43	22†	30	0.64	− 1.70	0.19	0.0	6	14	9	7	n.	Miss Gertrude McClintock
Wahluke	Grant	410	5	65.9[a]	.....	99[a]	1	32[a]	23†	53[a]	0.08	.....	0.08	0.0	1	23	2	5	.....	F. C. Koppen.
Wallace	Okanogan	4,000	...	.....	.....	.....	.....	.....	.....	.....	1.88	.....	1.02	0.0	5	6	20	4	s.	Geo. A. Wallace.
Walla Walla	Walla Walla	1,000	25	66.1	+ 0.7	93	16	41	23	40	0.61	− 0.32	0.26	0.0	8	11	12	7	s.	U. S. Weather Bureau.
Waterville	Douglas	2,624	19	60.8[b]	+ 4.2	95[b]	6	29[b]	20	47[b]	0.50	− 0.02	0.50	0.0	1	19[c]	3[c]	3[c]	w.	O. R. Hopewell.
Wenatchee (near)	Chelan	1,169	10	63.1	+ 3.4	92	1	29	30	32	0.80	− 0.20	0.60	0.0	5	20	6	4	w.	George Pitcher.
West Branch	Spokane	2,600	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Martin A. Murray.
Wilbur	Lincoln	2,203	10	58.4	+ 1.9	92	1	23	22	52	0.47	− 0.29	0.45	0.0	2	17	7	6	sw.	Rollin J. Reeves.
Yale	Cowlitz	375	2	61.7	.....	93[a]	6	35[a]	23	42[a]	.....	.....	.....	0.0	...	14[a]	9[a]	6[a]	sw.	L. F. Williams.
Zindel	Asotin	715	7	65.2	− 3.8	98	13	41	20	48	0.89	− 0.10	0.45	0.0	3	5	6	19	n.	M. W. Zindel.
Oregon.																				
Albany	Linn	214	33	61.4	+ 1.6	95	4	40	17†	42	0.93	− 0.91	0.40	0.0	7	17	5	8	n.	F. M. French.
Ashland	Jackson	1,940	25	64.2	+ 2.7	95	15	40	18†	51	0.72	− 3.44	0.33	0.0	5	7	15	8	nw.	F. H. Carter.
Astoria	Clatsop	11	47	62.0	+ 2.1	89	28	48	16†	33	0.68	− 3.48	0.65	0.0	3	19[a]	1[a]	9[a]	nw.	C. W. Lamar.
Baker City	Baker	3,466	20	58.0	+ 1.3	86	16	31	22	38	1.59	+ 0.79	1.01	0.0	7	12	9	9	s.	U. S. Weather Bureau.
Bay City	Tillamook	14	13	56.4	0.0	86	23	35	20†	51	2.50	− 2.28	0.58	0.0	10	17	6	7	nw.	J. O. Bozarth.
Birch Creek	Wheeler	2,900	...	61.8	.....	91	16	34	22	40	0.36	.....	0.11	0.0	6	10	16	4	w.	F. S. Matteson.
Black Butte	Lane	1,200	8	57.8	− 0.1	90	4	33	18	41	1.79	− 0.26	0.75	0.0	6	18	7	5	nw.	James A. Putman.
Blalock	Gilliam	237	10	69.9	+ 2.0	98	5†	44	18†	36	0.30	− 0.15	0.20	0.0	3	12	7	11	w.	Geo. W. Long.
Buckhorn Farm	Josephine	1,300	10	62.6	+ 2.4	99	15	36	21†	57	1.55	+ 0.37	0.73	0.0	5	20	2	8	n.	E. F. Meisser.
Cascade Locks	Hood River	100	18	62.3	+ 1.5	90	15	40	18	40	2.34	− 1.24	1.13	0.0	10	18	6	6	w.	Val W. Tomkins.
Cazadero	Clackamas	514	...	62.6	.....	93	4	38	18	47	2.24	.....	0.73	0.0	9	17	1	12	e.	A. Drill.
Condon	Gilliam	2,884	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Williams.
Corvallis	Benton	600	7	61.5	+ 1.4	88	6	40	12†	40	1.16	− 0.23	0.60	0.0	7	21	5	4	w.	Oregon Agric. College.
Dayville	Grant	1,500	14	62.0	+ 2.9	92	16	27	23	53	0.79	+ 0.02	0.25	0.0	7	17	11	2	nw.	Dr. J. Campbell-Martin
Doraville	Columbia	600	7	58.8	+ 0.1	89	4	38	22†	36	1.26	.....	0.44	0.0	8	11	9	10	nw.	Jos. Hackenberg.
Drain	Douglas	300	6	62.4	+ 1.2	96	4	35	22	57	1.08	− 0.18	0.36	0.0	5	16	8	6	nw.	Ira Wimberly.
Echo	Umatilla	625	5	65.6	.....	95	3†	33	23	47	0.30	.....	0.09	0.0	4	15[c]	4[c]	8[c]	w.	R. B. Stanfield.
Ella	Morrow	830	10	67.1	.....	95	6†	34	23	47	0.37	− 0.09	0.12	0.0	7	21	6	3	sw.	C. F. Troedson.
Eugene	Lane	449	18	61.9	+ 2.1	92	4	37	18†	46	1.11	− 0.54	0.35	0.0	5	19	0	11	n.	A. W. Jackson.
Fairview	Coos	142	11	55.2	− 3.9	105	15	32	16	67	1.67	− 0.47	0.56	0.0	6	19	2	9	nw.	Wm. Bettys.
Fall City	Polk	355	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. F. Vick.
Forest Grove	Washington	220	19	.....	.....	.....	.....	.....	.....	.....	0.91	− 0.63	0.42	0.0	5	.....	.....	.....	.....	Pacific University.
Gardiner	Douglas	72	19	59.4	+ 0.6	100	15	40	29	42	1.07	− 1.75	0.50	0.0	4	19	6	5	.....	Hon. J. S. Gray.
Glendale	do	1,441	5	63.4[d]	.....	97[d]	6	32[d]	22	52[d]	0.70	.....	0.40	0.0	3	23	1	6	n.	B. J. Simpson.
Glenora	Tillamook	575	17	59.6	+ 2.3	95	5	32	18	47	3.48	− 2.15	1.31	0.0	8	16	7	7	sw.	Mrs. Jennie Recher.
Gold Beach	Curry	40	6	56.4	− 0.6	86	14	41	27	42	1.71	− 0.09	0.60	0.0	5	20	0	10	nw.	C. Dewey.
Granite	Grant	4,680	4	54.0	.....	85	15	20	18	55	1.51	− 0.83	0.50	0.0	7	5	15	10	nw.	L. M. Ford.
Grants Pass	Josephine	956	20	63.4	+ 3.5	100	4	32	22	56	1.03	− 0.24	0.43	0.0	5	19	3	8	.....	John B. Paddock.
Grass Valley	Sherman	2,381	7	55.6	+ 1.9	89	1	29	13	37	0.45	.....	0.39	0.0	4	20	5	5	sw.	Agent, O. Ry. & N. Co.
Greenleaf	Lane	250	9	60.4	+ 0.8	89	5	35	18	47	1.89	− 0.75	0.59	0.0	7	19	0	11	sw.	Wm. Wheeler.
Headworks	Clackamas	719	10	59.8	.....	90	4	38	18	40	3.41	− 0.03	0.93	0.0	9	16	6	8	sw.	Portland Water Works.
Heppner	Morrow	1,950	20	62.0[a]	+ 2.2	93[a]	16	34[a]	18	46[a]	0.39	− 0.70	0.15	0.0	4	14	4	11	.....	Geo. Whiteis.
Hermiston	Umatilla	450	4	64.8	.....	95	6	33	23	49	0.18	.....	0.11	0.0	2	13	13	4	sw.	C. W. Kellogg.
Hood River	Hood River	243	18	62.0	+ 2.7	95	6	34	17	48	0.45	− 1.08	0.25	0.0	4	24	0	6	w.	H. L. Hasbrouck.
Huntington	Baker	2,110	7	66.4	+ 1.7	96	3	47	21†	38	1.20	+ 0.92	0.50	0.0	4	3	14	13	.....	J. M. Day.
Jacksonville	Jackson	1,640	20	64.4	+ 2.4	100	15	37	22	48	1.04	+ 0.14	0.56	0.0	6	19	5	6	.....	E. Britt.
La Grande	Union	2,784	21	61.2	+ 2.4	92	16	30	22†	50	1.77	+ 0.70	0.50	0.0	8	12	8	10	nw.	W. A. Worstell.
Madras	Crook	2,150	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. P. Rea.
Marshfield	Coos	12	7	57.8	− 0.2	93	15	40	18†	48	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. E. Mingus.
McKenzie Bridge	Lane	1,400	7	58.2	− 0.4	96	4†	27	18	58	3.57	+ 1.18	0.87	0.0	11	15	1	14	sw.	Geo. Frissell.
McMinnville	Yamhill	180	21	62.1	.....	97	5	35	18	51	1.48	.....	0.72	0.0	5	15	7	8	n.	C. J. McKee.
Mikkalo	Gilliam	1,600	5	63.4[a]	.....	93[a]	6	32[a]	18	47[a]	0.45	.....	0.14	0.0	7	16[a]	10[a]	3[a]	w.	J. T. Chandler.
Miramonte Farm	Clackamas	195	19	61.6	+ 2.3	93	5	36	22	40	1.23	− 0.98	0.60	0.0	6	17	8	5	n.	G. M. Muecke.
Monroe	Benton	350	12	62.6	+ 1.9	92	4	42	22	39	0.87	− 0.78	0.34	0.0	5	13	5	12	nw.	John H. Starr.
Mount Angel	Marion	485	23	63.8	+ 2.5	90	4†	41	22	36	1.49	+ 0.54	0.72	0.0	4	17	4	9	s.	Dr. U. F. Fisher.
Mountain Park	Hood River	1,550	4	59.8	.....	92	1	35	21	39	3.41	.....	1.65	0.0	8	17	7	6	w.	Raymond Markley
Newport	Lincoln	69	19	56.6	+ 0.6	83	23	40	21	33	1.32	− 1.46	0.33	0.0	9	12	10	8	nw.	Wm. Matthews.
Pendleton	Umatilla	1,272	19	65.0	+ 4.0	96	5†	33	23†	53	0.84	− 0.05	0.17	0.0	6	13	14	3	w.	H. F. Johnson.
Pilot Rock	do	1,872	....	65.4	.....	95	16	37	18	42	0.77	.....	0.26	0.0	8	15	12	3	nw.	John P. McManus.
Pompeii	Clackamas	3,580	14	53.2	− 1.9	87	8	31	18	42	5.43	+ 1.12	2.05	T.	9	15	5	10	sw.	O. C. Yocum.
Portland	Multnomah	57	40	63.3	+ 2.1	93	31	41	18	31	0.95	− 0.77	0.38	0.0	8	14	9	7	nw.	U. S. Weather Bureau
Port Orford	Curry	300	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Willis T. White.
Prineville	Crook	3,000	12	56.8	− 0.3	87	15	27	18†	50	1.54	+ 0.96	0.84	0.0	7	18	3	9	w.	C. I. Winnek.
Prospect	Jackson	2,750	4	60.2	.....	96	3	28	18	57	2.00	.....	0.80	0.0	7	13	12	5	w.	E. F. Graham.
Range	Grant	.....	4	53.9	.....	87	16	26	21	59	1.67	.....	0.45	0.0	3	13	14	3	.....	Craig Thom.
Riverside	Malheur	3,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Leah Fairman.
Roseburg	Douglas	523	32	62.8	+ 1.6	95	4	38	22	51	0.71	− 0.34	0.26	0.0	[e]	18	10	2	nw.	U. S. Weather Bureau.
Salem	Marion	120	18	62.6	+ 1.8	91	5	41	22	37	0.90	− 0.88	0.56	0.0	5	15	4	11	nw.	M. P. Baldwin.

TABLE 1.—*Climatological data for September, 1909. District No. 13*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon—Cont'd.																				
Siskiyou	Jackson	4,115	1	58.8	.....	88	15	33	30	37	1.02	.....	0.59	0.0	5	19	7	4	e.	Louise F. Bates.
Stafford	Clackamas	400	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. P. Gage.
The Dalles	Wasco	112	34	64.8	+ 2.3	93	5	38	23	40	1.05	+ 0.47	0.63	0.0	5	21	2	7	w.	S. L. Brooks.
Toledo	Lincoln	50	19	62.6	+ 4.2	95	15	35	22	54	2.05	− 0.78	0.70	0.0	6	23	5	2	nw.	C. B. Crosno.
Umatilla	Umatilla	340	19	67.8	+ 4.3	97	6†	39	18†	49	0.11	− 0.43	0.11	0.0	1	19	4	7	w.	Mrs. H. T. Duncan.
Vale	Malheur	2,450	17	62.8	+ 4.3	95	9	25	22†	57	0.94	.....	0.22	0.0	8	19	9	2	e.	H. P. Osburn.
Wallace Orchard	Polk	170	....	61.3	.....	94	5	36	18	44	1.65	.....	0.75	0.0	5	10	11	9	.....	Chas. A. Park.
Wallowa	Wallowa	2,935	6	57.8	.....	89	9	25	18	53	1.23	.....	0.41	0.0	9	7	6	17	nw.	L. J. Coverstone.
Warmspring	Crook	1,600	7	60.7	.....	95	15	31	18	45	1.15	.....	0.50	0.0	5	15	11	4	nw.	Claude C. Covey.
Weston	Umatilla	1,800	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. A. Baker.
Williams	Josephine	1,363	17	62.6	+ 3.2	100	5	32	18	60	1.19	+ 0.35	0.35	0.0	6	16	7	7	n.	J. M. John.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.
a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for September, 1909. District No. 12, Columbia Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Montana.																															
Anaconda	Missoula	*	.81	.60			T.	.05			*	.50						T.			.16	T.							.02	.21		2.35
Bison Mountain	do	.20	.25	1.29	.04		T.				.19	.80	.50					.12			.33	.04								.05		3.81
Columbia Falls	Flathead		.47								.28	.46						.15			.58	.87							.66			3.47
Como	Bitter Root	.70	.28	.17		.03				.43										.05	.21							.32	.01			2.20
Darby	do			.85	.10						.13	.70									.32							T.	.42			2.52
Dayton	Flathead																															
East Anaconda	Missoula	.44	.27	.18	T.	T.	T.	.08			.55	.10						T.		T.	.09	T.							T.	.19		1.90
Fortine	Flathead		T.	.04							.15	.04						.07		T.	.03	.04							.60	T.		0.97
Hamilton	Bitter Root	.30	.35	.40								.22	.04								.31	.08							.29			1.99
Hat Creek	Missoula	.50	.28	2.00				.30			.50	1.19	.34					.10		.14	.11	.13					T.		T.			5.59
Jocko	Flathead																															
Kalispell	do		.02								.14	.19					T.	.02		.01	.18	T.							.64	.01		1.21
Lost Creek	Missoula																															
Missoula	do	.23	.35	.80							T.	.19	.12					T.	.01		.04	.22	T.						.36	.06		2.38
Ophir	do	.06	.10	1.20							.14	.80	T.								.21								.38			2.89
Ovando	do	.15	.16	.20	.05	T.					T.	.33						.06	T.		.45	.15	T.						.33			1.88
Philipsburg	do	.17	.14	.56				T.				1.36	.18					T.	T.	T.	.17	.02							.20	.10		2.90
Pipestone Pass	do																															
Plains	Columbia	.20	.53								T.	.21									.47							.35	.40			2.16
Pleasant Valley	Kootenai		.20	T.							.10	.14	T.	T.							.27	.03							.43			1.17
Polson	Flathead		.90	.17								.33									.22								.56	.14		2.32
St. Ignatius	do	.13	.18	.50	T.						.03	.11	.11					T.		T.	.24	.08	.08	.01					.35	.11		1.93
St. Regis	Missoula	.24	.44	.04								.04									.46											1.22
Saltese	do		.50																.30		1.10								.82			2.72
Snowshoe	Kootenai																															
Troy	do										.20										.30							.85	.25	T.		1.60
Upper Lake McDonald	Flathead										.31	.37																		1.72		2.40
Woodville	Missoula	.22	.45	.11				.15	.03		.17	.74	.42					T.			.07	.05	T.				.03		.04	.36		2.84
Wyoming.																																
Afton	Snake																															
Alta	do		.10	.10		.01	.05	.57	.25		.08	.32	.70														.01	.05		.10	.55		2.79
Bedford	do																															
Snake River	do	.50	.20					.50			.10	.30	.70																	.50		2.80
Nevada.																																
San Jacinto	Snake	.29		T.	T.	T.	.48																						.16	T.			0.93
Idaho.																																
Albion	Snake	.39	.07	.10		.20																					.04			.39	.05		1.24
Almo	do	.20	.30			.25	T.					T.															.01		.10			0.86
Blackfoot	do	.09	.06	T.	.20	.30		.06			.02	.20	T.							T.		T.					.09		.60		.08		1.70
Blanche	do					.50		T.																					.65				1.15
Bogus Creek	Payette																															
Boise	Boise	.11	.03	T.			.09	.10			T.	T.								T.	T.				T.		.02	T.	.07	.02	.07		0.51
Bonanza	Salmon																															
Bonners Ferry	Columbia										.38										.08	T.							.14	.81			1.41
Boulder Mine	Boise	.40	.12	.13	.09		.57	.05													.05									.65	.44		2.50
Buhl	Snake	.12	.14	.54																									.72				1.52
Burke	Columbia		.10								.08	.07						.04			.87	.16		.05						1.70	.14		3.21
Caldwell	Boise	.16	.30	.01																									.40	.05	.25		1.17
Calls Ranch																																
Camas	Lost River Region	1.02	.20	T.	.50	.53	.05	.09			.06	.16	.18														.09			.39		3.27
Cambridge	Snake	.04	T.	T.			.04	.20			T.	.05										T.							.12	.12	.11		0.68
Chesterfield	do	.11	T.	.12		.15	T.	.05	.10		.03	.13	.10														.56			.23	.25		1.83
Clawson	do	.70	.13	.10		.02		.42			.25	.20	.66														.10	.12		.10	.50		3.30
Coeur d' Alene	Columbia	T.									T.																		.60			0.60
Culdesac	Clearwater										.30										.46							.41		.35		1.52
Dent	do	.07	.15								.12	.72									.41							.40	.63	.53		3.03
Driggs	Snake	.60	.15	.08	.03	.12		.62			.08	.30	.52									T.				T.			.50			3.00
Edie	Lost River Region	2.10	.42	T.	.20	.12	.16	.08				.01																	.38			3.47
Emmett	Payette	1.00	.09																										.27	.41		1.77
Forney	Salmon	.50			.20	.25	.25	.40	.14		.10	.45	.10								.10	.20							.40	.10		3.19
Gilbert	Clearwater	.10	T.	T.							.20	1.10						T.		T.	.30	.10							.20	.40	.50		3.30
Glenns Ferry	Snake		.60									.01																	.25	.38			1.24
Grand Forks	Columbia	.10	.08					.08			.10							.10			.95	.29	.03						.09	1.30	.30		3.42
Grandview	Snake	.40	.09			.32	.02																				T.		.15		T.		0.98
Grimes Pass	Boise	.36	.10	.04		T.	.23		.04																					.70	.58		2.05
Guffey	Snake	.11	.23	.02				T.			T.	T.									T.	.02					.01		.16	.04	.03		0.62
Hailey	Wood-Malad	.18	T.	.05		T.	.17	.21				T.										T.					T.	.10		.90	T.		1.61
Henry	Snake	.66	.14			.25		.29			.05	.20	.25									.02					.17	.03		.29	.26		2.61
Hotspring	do		.60	T.																							T.		.10	.38	T.		1.08
Idaho City	Boise	.35	.75		T.	T.	T.	.40											T.	T.							T.			.49	.26		2.25
Idaho Falls	Snake	.36		.11		.72	.45	.06		T.		.29	.11														.05	.26	T.	.28	.09		2.78
Indian Valley	do																												.30	.05	.37		0.72
Irwin	do		1.10	.19	.21	.09	.30	.58			.30		.80																	.18	.34		4.09
Kellogg	Columbia		.07	.01								.03									.25	.14							1.98	.17		2.65
Kooskia	Clearwater	.03	.02	.30	T.			.03			.02	1.15	T.					T.	T.	T.	.50								.30	.22		2.57
Lake	Snake	.50	T.	.25		.50		T.																							.50		1.75
Lakeview	Columbia			.10						T.	.15										.50								.80			1.55
Landore	Snake	T.	T.	.60		.33	.02				.41	.55						T.		T.	.33								.38	.65	.28		3.55
Lardo	Payette																															
Lewiston	Clearwater	T.	T.	T.							.48	.16								T.	.12							.01	.05	.60	.01		1.43
Little Camas	Boise	T.	.28		T.	.81	.08	.09				.07								T.	T.					T.	T.		.38	.67	.14		2.52
Lost River	Lost River Region																															
Lowry	Owyhee																															
Mackay	Lost River Region	.39	.36	.05	.08	.65	.55	T.				T.															12	T.		.50	T.	T.		2.70
Meadows	Salmon	.28	.06	.01			T.	.06			.07	.13									.08	T.							.13	.37	.21		1.40
Milner	Snake	.01	T.		.02	.03																					T.		T.	T.	T.		0.06
Moscow	Columbia	T.	.07	.07														T.	.20	T.	.30	.05							.20	.50	.05		1.54
Mountainhome	Snake		.17				.15					T.															.02		T.	.28			0.62
Murtaugh	do	.20	.05	T.		.60	T.																							.51	T.		1.36
Nez Perce	Clearwater	.23	.14														1.20	.18												.30			2.05
Oakley	Snake	.65	.23	.21		.26		.16																				.05		.45	.04		2.05
Orofino	Clearwater	.03									.45	.55								.47	.50							.02	.73	.62		3.37
Payette	Payette	.08	T.	.02		.03		T.			.02	T.															T.	T.	.46	.30	.08		0.99
Pebble	Snake	1.23	.08	T.					.41			.12	.04														.15	.06		.53	.08		2.70
Pierson	Salmon	.72	.15		.07																									1.00	.08		2.02
Pleasant Valley	Boise	T.						.02			T.																.02		.18		.05		0.27
Pocatello	Snake	.76	.33	T.	T.	.57		.20			.06	.07	.01													T.	.01		.45	.01			2.47
Pocatello Nursery	do	1.52			.18	.41		.19			.03	.17	.11														.08		.85		.15		3.69
Poplar	do	.68	.64	.09	.24	.24	.03	.23			.25	.11	.40														.03	.21		.24	.20		3.59
Poplars	Boise	.06	.35	.17																							*	*	.82		.20		1.60
Porthill	Columbia										.31										.24								.06	.60	.06		1.27
Pyle Creek	Payette	.85	.15	.11	T.	T.	T.	.08													T.									.42	.55		2.16
Rupert	Snake	.63	.06	.88	T.	.25	T.	T.																			.09	.02	.01	.39	.02		2.35
St. Maries	Columbia		.03								.10							T.			.25	T.							.33	.82	.03		1.56

TABLE 2.—*Daily precipitation for September, 1909. District No. 12*—Continued.

Stations.	River basins.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Idaho—Cont'd.																																	
Salem	Snake	.59	.74	.13	.02	.51	.20	.19					.24								.09	.21					T.		.15		.27	.14	3.18
Salmon	Salmon	.41	.10	.10	.06	.03	.23	.17	.05		.06	.16	.06																				1.85
Salmon River Dam	Snake	.17	.13		.37	T.	.11	.20				T.																	.11	.28	T.		1.37
Sheep Hill	Boise	.66	.54	.01	T.	.16	.41	.24			.04	T.									.02	.01						.01	.02	.33	.15		2.60
Silver City	Owyhee	.07	.06	T.	.04	.07	.51				.01	.08															.01		.23	.10	.08		1.26
Soldier	Wood-Malad																					.20								.50	.35		1.15
Staadrod	Snake	.09	.32	.03	T.	.17	.05	.10			T.	.05														.06	.21	.07	T.	.62			1.77
Sugar	...do	.79	.06			.84		.42			.04		.24									T.					.18		.29		.16		3.02
Sunnyside	...do		.04		T.	.40						T.															.22		.05	.10	T.		0.81
Tilden	...do	.30		T.		.17		.12			T.	T.										T.				.08	T.			.40	T.		1.07
Twin Falls	...do	.29	.45	.13	.04	.05																								.36	.22		1.54
Vernon	...do	1.10		.38		.10		.07					.44									T.				.71	T.	.11		.22	.23		3.36
Wallace	Columbia	.10	.11	.01							.04	.05	T.					.10		T.	.78	.19							.04	.96	.11		2.49
Warfield	Wood-Malad																																
Wendell	Snake	.18	.28	.05																									.25	.26			1.02
Washington.																																	
Aberdeen	Coast								.03	.12	.49						.12			.17	.30			.05						.26			1.54
Anacortes	Puget Sound								.01	.26							.05			.34	.30				.01	.01			.01	.29	.05		1.33
Baker	...do										.19							.31	.26	.05	1.17	.31							.33	.72	.14		3.48
Bellingham	...do									T.	.50					.22					.57	.06								.27	.10		1.72
Blaine	...do									T.	.52						.08			.35	.26				14			.04	.18	.05		1.62
Bremerton	...do									.32								.04			.01					.17				.07	.08		0.69
Cedar River	...do										.21						1.04			.47	.04				.29				.62	.08		2.75
Centralia	Coast									T.	.15						T.			.05	.36					.22		T.	.17	.03			0.98
Cheney	Spokane										T.																		.27		T.		0.27
Chopaka	Okanogan										.02							T.			T.					21	.22		.05	.70	.03		1.23
Clearbrook	Puget Sound										.48						.10			.09	1.05						.03			.10	.07		1.92
Clearwater	Coast								.06	.70	.44	.85					.23			.50	.50	.02			.60					.60	.01		4.51
Clealum	Yakima																				.57	.56				.35				.75	.02		2.25
Colfax	Palouse			.11							.10	.25																.20					0.66
Colville	Volumbia										.23										.10	.05				.05			.51	.70			1.64
Conconully	Okanogan																				.06					1.02	.67		.12	.29	T.		1.56
Coupeville	Puget Sound																																
Crescent	Spokane		T.									T.																	.39	.13			0.52
Davenport	Columbia			.12																						T.			.45	.02			0.59
Dayton	...do		T.								.01	.15									.41								.25	.03	.05		0.90
Detroit	Puget Sound									T.	.04									.13	.07					22				.38	T.		0.84
Dixie	Columbia										T.	.40								.05	.64	T.							.40	.32	.15		1.96
Duckabush	Puget Sound										.12																	70‡		.20			1.02
East Sound	...do																																
Ellensburg	Yakima																									.12			.05	.39			0.56
Ephrata	Columbia																												.10	.20			0.30
Forks	Coast																																
Fort Simcoe	Yakima																									20			.10	.10			0.40
Goat Lake	Puget Sound										.77	.03						.88			1.92	1.37				.18	.11			.90	.23		6.39
Gold Creek	Yakima										.03						.06				.03					43					.45		1.00
Goldendale	Columbia		T.																			T.				.28	.05	T.		.05	T.		0.38
Granite Falls	Puget Sound										.58	T.					.18	.36		.11	.45	.02				.10			.05	.96	.02		2.83
Hatton	Columbia		.25								.07										T.								.15	.02			0.49
Huntsville	...do		T.									.20									.05									.30	.13		0.68
Irene Mountain	...do																				.05					.06	T.		.49	.48	T.		1.08
Kennewick	...do																																
Kettle Falls	...do			.26							.74										.14	.06				.02			.33	.14			1.69
Kiona	Yakima																													.03			0.03
Kosmos	Columbia										.04							.09		.03	1.36	.03				.05				.52	.05		2.17
La Center	...do															.14			.04		.90					.22		.19	.80	.09		2.38
La Crosse	Palouse		T.	T.							.21	.07						.02		.02	.04					T.			.33	.02	.02		0.71
Lake Clealum	Yakima									T.	T.						.15			.01	1.50	1.10				.42			T.	.35	.15		3.68
Lake Kachess	...do										.12	.03					T.			T.	1.46	1.17				.20			.29	.50			3.77
Lake Keechelus	...do							T.			.15	T.					.18			.10	1.90	1.20				.08			.22	.50			4.33
Lakeside	Columbia																			T.	T.					.04			.16	.79	T.		0.99
Laurel	...do																				.40					.13			.14	.28			0.95
Lester	Puget Sound										.40						1.75			1.10	.80												4.05
Lone Tree	Coast		T.	.01		T.	T.	.08	.04	.12	T.						.06		.02	.02	.30	.01	.03		.05	.04			T.	.21			0.99
Longmires Springs	Puget Sound																																
Lost Creek	Columbia										.08															T.			.50	.66			1.24
Lucerne	...do																																
Lyle	...do																	T.		T.	.32				T.	.20			.41	.13	.01		1.07
McCumbers Ranch	...do																		T.	T.									.16				0.16
Mottingers	...do																	.12	.01	.05	.54	.13				.07			.07	.75	.05		2.37
Mount Pleasant	...do										.58															.15			.06	.05			0.39
Moxee	Yakima		.13																														
North Head	Coast							.01		.09	.11						.11			.16	.37				.12	.13		T.	.17	T.			1.27
Northport	Columbia			T.							T.																	T.	.11	.15	.19			
North Yakima	Yakima		.05																		T.					.12	T.		.18	.39			0.74
Nutland	Columbia																				.06				.06	.02			.08	.07			0.29
Odessa	...do		T.								T.									T.	T.					T.			T.	.14			0.14
Olga	Puget Sound										.44					.05	.11			.29	.25	.10								.35			1.59
Olympia	...do									T.	.42						T.			.04	.34					12				.22	T.		1.14
Omak	Okanogan																	T.	T.	T.	.01					.02			.20	.16			0.39
Oroville	...do																				.02					.08		.75	.25	.50			1.60
Peola	Snake	.07	T.	.29					.02	.10											.01	.61	.02						.10	.09	.02		1.33
Pomeroy	...do										T.									1.00								T.					1.00
Port Crescent	Coast								T.	.11	.07						.04			.18	.15				.09	.01			T.	.03			0.68
Port Townsend	Puget Sound									T.	.10						.24				.20					15				.40			1.09
Pullman	Palouse	T.		.17							T.	.10						T.		T.	.28								T.	.30			0.85
Quiniault	Coast							.01	.46	.10	.42	T.					.07	T.		.32	1.52	.06			.18	.06			.03	.70	.04		3.97
Republic	Columbia										.07									.05	.12								.42	.58			1.24
Rex Creek	...do																																
Ritzville	...do																											20					0.20
Rock Lake	Palouse	.05	.01								.05	.01																	.10				
Rosalia	...do		T.																	.05									.05	.12			0.22
Russells Ranch	Yakima		T.								.02							T.			.10			.08					.04	T.	.04		0.28
Seattle (1)	Puget Sound									T.	.08						.41			.03	.08			T.	.21				.03	.26	T.		1.10
Seattle (2)	...do										.16							.67		.01	.03	.03				.19			.01	.30	.04		1.44
Sedro-Woolley	...do										.17						.11	.05		.40	.41	.38			.11					.80	.10		2.53
Sixprong	Columbia		T.	T.							T.										.02					.06	T.			.11			0.19
Skagit Power Dam	Puget Sound										.60							.30		.30	1.90	.50				.30			.30	.50	.10		4.80
Snohomish	...do										.28	.02					.17	.30		.03	T.	T.				.10			T.	.35	.01		1.26
Snoqualmie	...do									T.	.33							.77		.07	1.47	1.35	T.			.12	T.		.13	1.00	.01		5.25
Snyders Ranch	Columbia																			T.	.29					.05				.38			0.72
South Bend	Coast																																
Spokane	Spokane	T.	T.							.02	.01							T.		.05	T.	.02				T.		T.	.05	.03			0.18
Stehekin	Columbia																																

TABLE 2.—*Daily precipitation for September, 1909. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Washington—Cont'd.																																	
Stokes Ranch	...do																																
Sullivan Lake	Pend Oreille																																
Sumner	Puget Sound										.10	.02					.08	.01		.01	.38					.28				.24	T.		1.12
Sunnyside	Yakima		.02								T.															.06	T.			.33			0.41
Tacoma	Puget Sound									.01	.06						.04			.29	.05				.02	.22			.14	.07	T.		0.90
Tatoosh Island	Coast							.08	.08	.41				T.			.15		T.	.56	.17		T.		.51			T.	.01	.06		2.03
Tieton	Yakima									.02											.10					.28			.01	.41			0.82
Touchet	Columbia		T.								T.	.14								T.	.02					T.			.20	T.			0.36
Touchet Ridge	...do		.25								.35									.34	.15								.42				1.51
Trinidad	...do									T.																.02			.02	.32			0.36
Twisp	...do																																
Tyee	...do																				.59					.12			.05	.62			1.38
Vancouver	...do										.36										.29	.01				.27			.15	.25	.08		1.41
Vashon Island	Puget Sound										.11	.01					.03			.12	.18								T.	.19	T.		0.64
Wahluke	Columbia																												.08				0.08
Wallace	Okanogan										.10										.11					1.02			.18	.47			1.88
Walla Walla	Columbia	T.	T.								.11	.15								.01	.11					T.		.01	.13	.02	.07		0.61
Waterville	...do																									T.		T.	T.	.50			0.50
Wenatchee (near)	...do										T.							.02			.11					.01			.06	.60			0.80
West Branch	Spokane																																
Wilbur	Columbia																			T.									.45	.02			0.47
Yale	...do										.25	.03								.02	1.13								.80	.30			
Zindel	Snake										T.	.45								T.	.17							T.	.27				0.89
Oregon.																																	
Albee	John Day																																
Albany	Willamette										.12										.10	.04				.06		.01		.40	.20		0.93
Ashland	Rogue																								.08	.33	.06		T.	.22	.03		0.72
Astoria	Columbia												.02										.01				.65						0.68
Baker City	Snake	.07	.26	.82		T.	T.	T.		1.23	.08										T.							T.	.11	.02	T.		1.50
Bay City	Coast	T.								.05	.21	.19						.04		.11	.34	.27				.14				.57	.58		2.59
Bear Creek	Deschutes	.15	.04	.27																						.06		.13	.14		.22		1.06
Beaver Creek	...do																																0.00
Bellfountain	Willamette										.01										.29	.01			T.	.12	T.			.54	.25		1.22
Bend	Deschutes		.90								.07													.05		.05			.34	.03	.06		1.50
Big Basin	John Day	.10	.80	.05		.20					.45																	.20		.10	.05		1.95
Birch Creek	...do			.06	.10	T.					.11														.04	.04			T.	.01	T.		0.36
Black Butte	Willamette										.29	.05					T.				.10					.25				.75	.35		1.79
Blalock	Columbia		T.																		.02				T.	.08			T.	.20			0.30
Blue Mount Sawmill	Umatilla			.12								.65								T.	.50	.06							.46	.10	.05		1.94
Buckhorn Farm	Rogue River																								.11	.49	.01			.73	.21		1.55
Butte Falls	...do	.10	.06								.03														T.	.59	.03	.06	T.	.30	.46		1.63
Cableville	Snake																																
California Gulch	Umatilla	.30	.25								.35	.25																		.30			1.20
Canyon City	John Day			.08	.04	.06					.20										.03					T.			.04	.08	.10		0.63
Cascade Locks	Columbia										.26	.06						.03		.10	1.13	.10				.04			.14	.34	.14		2.34
Cascadia	Willamette										.47	.12						.01		.03	.67	.26			.05	.15	.01			.50	.81	.36		2.84
Cazadero	...do										.30	.08						.03		T.	.73	.10				.04				.42	.50	.04		2.24
Columbia Mine	Snake	.11	T.	.18	.04	.75	.02				T.	.18									.03	.11								.69	.12	.07		2.30
Condon	John Day																																
Coquille River L. H.	Coast																.18				.06					.37			.06	.48	.07		1.22
Cornucopia	Snake	.11	.21	.13		1.02	.15	.01			.07	.27									.36	.11							.48	.29	.08		3.29
Corvallis	Willamette										.03										.03	.05			T.	.06	.12			.27	.60		1.16
Cracker Creek	Snake	.01	T.	.02	T.	.02	T.				T.	.01									T.	.03						T.	.07	T.			0.16
Crescent	Deschutes																																
Dayville	John Day	T.	.05	.15	.01	.25					.20										T.							.05		.08			0.79
Doraville	Columbia									.07	.15							.06		T.	.44	.03				.33				.14	.04		1.26
Drain	Umpqua									.09											.11				T.	.35				.36	.17		1.08
Duncan	Umatilla		.65											.35																.40			1.40
Echo	...do		.08								.09										.05								T.	.08			0.30
Elkhorn Ranch	Coast								T.	.08									T.	.10	T.			.05	.66				.74	.17		1.80
Ella	Columbia		.05							.03										.03						.02	.12	T.	.05	.07			0.37
Embody	Deschutes	.04	.02							.03	.04	.01											.02	.01	.03	.05	.01	.02	.01				0.29
Eugene	Willamette										.35										.07					.32				.26	.11		1.11
Eugene (River sta'n)	...do																																
Fairview (1)	Coast	T.				.05	T.			.03											.02								.02	T.			0.12
Fairview (2)	Snake											.22										.28	T.	.12		.26		T.	.56	.23		1.67
Falls City	Willamette																																
Fir Glen	Coast																				.10				.09	.39			.01	.62	.12		1.33
Florence	...do								.04	.03	.04	.05						.03		.04	.17	.01			.02	.30			.08	.64	.13		1.58
Forest Grove	Willamette																					.16	.03			.18				.42	.12		0.91
Galice	Rogue																									.33			.01	.92	.30		1.56
Gardiner	Umpqua																											32	.13	.50	.12		1.07
Glendale	...do																									.20				.40	.10		0.70
Glenora	Coast										.35																			.99	.40		3.48
Gold Beach	Rogue																	.03		.06	1.31	.09				.25							
Granite	John Day	T.		T.	.47	.02	T.				.16	.08									.26					.60			.17	.53	.15		1.71
Grants Pass	Rogue																				T.	.20							.50	T.	.08		1.51
Grass Valley	John Day																								.05	.27			.10	.43	.18		1.03
Greenleaf	Coast																								.03			.01	.02	.39			0.45
Happy Home	Umpqua										.22										.54	.03			.06	.19			T.	.59	.26		1.89
Hazeldell	Willamette	T.							.33	.42							.14				.27					.54	.03	.08	.21	.46	1.10		3.58
Headworks	...do											.15				T.			T.		.20				.10		T.		1.27	.56	.25		2.53
Heppner	Columbia	T.	.06	.06							.82							.32		.14	.93	.28			T.	.05			.32	.43	.12		3.41
Hermiston	Umatilla										.12									T.	T.					.25		T.	T.	.15			0.39
Hilgard	Grande Ronde		.23	.25	.05	.08	.32				.10	.20								.07								.11					0.18
Hood River	Columbia																				.15					.40							1.78
Howardville Station	Grande Ronde		.14	.33			.27				.28	.24					T.				.10	.05							.25	.05			0.45
Huntington	Snake	.10		.25																	.30	.15							.19	.09			2.28
Ibex Mine	John Day	.03	T.	.25	.04	.60					.20	.42									T.	.28							.50	.35			1.20
Ironside	Snake		.50	.40		1.04	.55				.12									T.	T.						.05	.35	T.			2.53
Jacksonville	Rogue																								.06	.56	.03		.07	.26	.06		3.01
Joseph	Grande Ronde																																1.04
Kamela	...do		.70				.30				.50	.90									.45	.15							.40				3.40
Keeps Mill	Deschutes																				.09								.11				1.77
La Grande	Grande Ronde		.23	.50		.05	.22				.43	.15														.15	.18	.02	T.	.12	.08			0.55
Lilyglen	Rogue									T.																				.14			1.02
Long Creek	John Day		.30	.10		.35					.13								T.														
Madras	Deschutes																									.28	.10	T.	.02	.29	.24		1.76
Maury	...do	.25	.09	.07							.36	.06																					
McKinzie Bridge	Willamette			.10							.53	.20									.39	.21			.14	.09	.02		.27	.75	.87		3.57
McKay	Umatilla																																
McMinnville	Willamette										.13																						
Meacham	Umatilla		.49								.69	.72								T.	.36					.10			.72	.17			1.48
Mikkalo	John Day			.02							.05										.22								.50				2.62
																					.04					.11	.03		.06	.14			0.45

TABLE 2.—*Daily precipitation for September, 1909. District No. 13*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon—Cont'd.																																	
Miramonte Farm	Willamette										.14										.28	T.				.12			.07	.60	.02		1.23
Monroe	do										.04										.15	T.			T.	.12	T.			.34	.18		0.83
Mountain Home	Columbia										.18						T.	.07		.06	.50	.05				.40				.24	.08		1.58
Mount Angel	Willamette										.13	.03									.61									.72			1.49
Mount Hood	Columbia										.02						.01			.50	.20				.12			.01	.19	.12	T.		1.17
Mountain Park	do																	.06		.04	1.19	.18			.02			1.65	.20	.07		3.41
Mountain Ranch	Rogue																									.05		.01		.05	.05		0.16
Musick	Umpqua		.10								.84	T.									.20					.44	.05	.14	.28	.04	.73		3.82
Newport	Coast										.20	.06						.04		.06	.06				.15	.16				.33	.26		1.32
Nigger Flat	Malheur																																
Ochoco	Deschutes		.50									T.													.01	.02			.26	.15	.20		1.14
Ochoco Creek	do		.99								.20	.03													.02	.19		.09		.10	.09		1.71
Owyhee	Owyhee	T.	.25		T.	T.				T.		T.																		.20	.10		0.55
Pendleton	Umatilla										.17	.15								.22	.06								.05	.09	.10		0.84
Persist	Rogue											T.								T.	T.					.60				.91	.33		1.84
Pilot Rock	Umatilla		.04	.26							.13	.08									.01								.11	.03	.11		0.77
Pompeii	Willamette										.70	.30						.09		.20	2.05	.79			T.	.25			T.	.90	.15		5.43
Portland	do									T.	.15	.01						T.		.10	.15	T.			T.	.04			.38	.10	.02		0.95
Port Orford	Coast																																
Post	Deschutes	.23	.14	.05						.17																.17	T.	T.	T.		.30		1.06
Power House	Walla Walla	T.	T.	T.						T.	.10	.20								T.	.28								.25		.05		0.88
Prineville	Deschutes	T.	.84								.06														.06	.18		.09	.12	.19			1.54
Prospect	Rogue	.10	.15								T.														.05	.50		.05	T.	.80	.35		2.00
Range	John Day	T.	1.07	T.					.45	.15																							1.67
Ray Creek	Columbia	.11	.14								.16																			.17			0.58
Reston	Umpqua																				.11				.15	.42	.01			.47	.23		1.39
Richland	Snake		.06				.09				.10																		.20		.05		0.41
Riverdale Ranch	Deschutes																																
Riverside	Malheur																																
Rock Creek	Willamette										.09															.50				1.20	.12		1.91
Roseburg	Umpqua										.01						T.								.26	.07		.03	.10	.24	T.		0.71
Rosland	Deschutes		.85								.04										T.	.02			.14	.46	.09	.05	.02	.05	.20		1.92
Salem	Willamette									.04											.20					.02			T.	.56	.08		0.90
Seneca	Interior	.10		T.		.08	.08				.14																				.12		0.52
Siskiyou	Rogue	T.	T.																						.07	.59	.12		.01	.23	T.		1.02
Sisters	Deschutes	.16	.75								.03														.03	.14	.22	.02	.02	.20	.13		1.70
Skyland	Willamette																																
Sparta	Snake																																
Stafford	Willamette																																
Starkey	Grande Ronde	.40	.20	T.		.13			.03	.01								T.											.13				0.90
Summit	Willamette										.18							.07		.08	.45	.05			T.	.10				.48	.32		1.73
Summit Prairie	Deschutes		.52	.16							.17	T.									T.				.14	.10					.20		1.29
Sussanville	John Day	T.	.05	.10	T.	.21	T.				.21	.46									.02	T.							.08	.02	.07		1.22
Telocaset	Snake																																0.00
The Dalles	Columbia		.02																		.03				T.	.20			.17	.63			1.05
Tin Roof Cabin	Umatilla	.21	.59	.13	.01		.06				.28	.14									.05	.02				.03		T.	.02	.04	.09		1.67
Toledo	Coast										.20	.15								.20						.15				.65	.70		2.05
Trask	do										.25	.10					.05			.08	.55	.63			.30				1.32	.40		3.68
Umatilla	Columbia		.11																							T.				T.			0.11
Unity	Snake	T.	1.82	.27	.04	.31	.07	.04			.10	.03																	.58	T.	T.		3.36
Vale	Malheur	.05	.22	.19				.02			.07																		.10	.10	.09		0.94
Van	do																																
Wallace Orchard	Willamette										.08										.60					.06			T.	.75	.16		1.65
Wallowa	Grande Ronde	T.	.08	.03		T.	.07				.22	.26									.41	.04							.06	T.	.06		1.23
Walloupa	do	T.	.18	.08	.02						.26	.16									.35	.04							.08	.03	T.		1.20
Wamic	Deschutes																									.15	T.		.34		.35		
Warmsprings	do										.05														.25			.30	.50	.05			1.15
Wasco	Columbia		.08								T.															.25	.02			.27			0.62
Welches	Umatilla										.90	.05								.25	1.30	.85					.08	.09	.50	.40	.25		4.67
Wenaha Springs	do											.80									.60									.40			1.80
Weston	Walla Walla																																
Willamina	Willamette									T.	T.													T.	.15				.39			0.54
Williams	Rogue	T																							T.	.28	.06	.16	.12	.35	.22		1.19

TABLE 3.—*Maximum and minimum temperatures at selected stations for September, 1909. District No. 12, Columbia Valley.*

Date.	Montana.						Idaho.																			
	Kalispell.		Missoula.		Afton, Wyo.		Boise.		Bonners Ferry.		Hotspring.		Lewiston.		Mackay.		Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		Wallace.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	80	52	65	53	.....	.....	82	65	90	50	86	62	77	65	67	56	75	58	76	60	68	59	75	62	68	55	82	50
2...	68	56	71	57	.....	.....	82	61	88	54	76	60	74	60	67	47	80	54	75	54	74	57	77	51	72	40	65	56
3...	65	44	61	57	.....	.....	76	59	84	52	80	64	85	59	66	46	75	48	78	53	71	51	76	52	74	50	75	56
4...	72	39	69	48	.....	.....	81	56	86	42	85	65	87	62	70	47	79	48	79	49	72	54	81	51	80	48	77	47
5...	83	42	79	48	.....	.....	82	57	90	41	74	60	91	58	67	48	79	43	65	56	72	50	71	59	60	53	85	46
6...	78	45	80	47	.....	.....	75	60	91	42	76	58	90	62	64	49	77	49	75	53	74	55	75	50	72	50	88	46
7...	78	45	82	53	.....	.....	78	60	90	42	80	57	93	62	68	54	73	53	72	52	74	55	74	52	69	49	82	48
8...	82	45	82	47	.....	.....	83	56	84	48	86	53	91	56	73	47	83	45	77	54	75	53	79	50	72	50	80	43
9...	79	43	87	45	.....	.....	91	57	97	44	84	50	91	54	74	44	87	40	79	53	80	43	83	51	76	44	86	41
10...	62	48	70	49	.....	.....	84	46	68	48	83	65	75	53	73	41	78	38	79	48	79	43	80	54	74	43	73	46
11...	56	45	49	42	.....	.....	54	44	73	41	72	44	66	50	70	34	47	36	57	43	63	43	66	40	65	40	57	45
12...	63	43	66	44	.....	.....	69	38	74	40	72	38	76	46	57	35	68	38	61	42	59	43	67	32	50	36	68	37
13...	71	47	72	48	.....	.....	78	50	86	45	79	45	81	50	70	50	72	36	72	39	73	40	75	37	65	32	71	46
14...	73	42	75	38	.....	.....	80	48	77	48	82	45	82	48	73	39	80	32	77	51	74	39	79	41	70	35	70	38
15...	78	40	82	41	.....	.....	83	53	84	40	82	44	86	49	75	43	85	33	80	47	78	39	82	43	74	36	81	39
16...	78	41	84	39	.....	.....	91	53	88	48	90	45	92	52	77	43	84	34	81	47	80	36	84	46	76	40	87	40
17...	60	44	57	48	.....	.....	75	44	84	48	68	47	72	53	75	44	62	46	76	49	60	44	70	45	70	40	73	47
18...	58	40	60	38	.....	.....	67	36	70	34	72	36	88	42	57	30	64	23	63	33	62	26	64	30	60	23	61	33
19...	58	33	64	36	.....	.....	72	46	65	35	74	54	68	47	65	47	68	40	70	46	68	39	69	38	60	30	60	36
20...	56	44	55	42	.....	.....	67	49	59	38	74	40	68	52	60	51	64	45	63	48	61	44	66	48	62	49	55	42
21...	54	41	51	40	.....	.....	60	41	62	32	73	55	67	47	54	36	57	34	54	34	55	37	60	39	54	35	56	37
22...	58	38	56	42	.....	.....	64	36	65	34	71	46	69	41	57	26	63	20	58	30	60	39	62	27	56	22	56	40
23...	61	30	68	30	.....	.....	77	44	74	30	66	35	78	42	62	29	72	25	69	36	66	27	72	33	67	25	68	32
24...	69	34	75	34	.....	.....	87	50	77	32	80	36	88	48	70	34	83	28	79	44	73	27	81	44	79	32	78	40
25...	70	39	77	42	.....	.....	82	54	72	39	90	48	75	54	76	37	74	45	83	58	80	33	85	54	82	44	67	45
26...	69	44	76	40	.....	.....	78	52	74	38	80	55	77	51	66	45	77	35	72	55	82	49	75	52	73	42	67	41
27...	74	44	80	43	.....	.....	81	51	76	35	85	51	88	52	70	39	81	35	81	53	80	44	79	54	79	48	67	44
28...	81	45	83	48	.....	.....	73	54	87	45	79	50	72	61	60	47	65	45	79	49	81	38	78	54	81	45	82	49
29...	61	39	68	50	.....	.....	65	47	78	45	66	47	68	49	70	36	56	45	65	48	72	41	59	43	66	48	64	46
30...	55	33	55	40	.....	.....	57	44	54	33	66	42	63	46	51	34	53	39	53	35	57	41	54	40	52	39	60	35
31...																												
Mns	68.3	42.2	69.9	44.3	.....	.....	75.8	50.4	78.2	41.4	77.7	49.9	78.6	52.4	66.8	41.9	72.0	39.7	71.6	47.3	70.8	43.0	73.3	45.7	68.6	40.8	71.4	43.0

Date.	Washington.																									
	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Sixprong.		Spokane.		Tacoma.		Tatoosh Island.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	85	44	74	43	95	45	90	43	95	62	66	52	96	63	93	48	65	44	82	57	92	75	86	67	80	53	65	50
2...	70	47	75	44	87	55	88	44	92	62	56	52	86	64	91	52	69	44	79	55	87	66	74	62	82	55	61	48
3...	68	55	74	45	90	50	85	46	91	60	58	54	88	55	86	55	57	46	75	54	89	62	81	56	77	54	55	49
4...	92	50	75	47	90	47	97	50	90	61	80	52	88	64	91	50	78	44	82	56	87	65	81	58	86	56	66	45
5...	74	51	74	47	94	42	91	49	95	59	60	56	90	56	95	53	64	50	84	58	94	60	88	50	85	57	59	52
6...	65	48	71	45	95	43	88	45	94	61	56	52	92	58	94	50	56	49	78	57	95	61	88	51	79	56	54	51
7...	68	52	70	48	93	42	81	44	94	63	62	52	89	60	91	50	62	49	68	52	93	60	87	56	70	52	58	49
8...	64	58	72	56	87	41	82	44	82	60	63	55	84	57	91	48	63	53	74	58	88	58	82	59	74	55	60	53
9...	63	56	62	56	88	40	71	47	83	55	59	55	82	56	85	45	58	52	69	56	87	57	84	52	69	55	59	53
10...	63	51	67	52	75	50	61	51	72	59	58	54	66	52	87	45	60	44	61	52	83	52	67	52	62	51	58	51
11...	62	45	64	42	72	38	62	44	76	54	56	53	72	52	88	45	55	37	64	48	76	47	67	46	65	46	58	49
12...	64	45	66	41	82	35	78	48	83	49	56	51	84	50	79	38	57	41	70	52	85	46	75	48	72	47	54	50
13...	65	50	66	50	80	42	49	48	80	54	56	52	81	57	80	48	57	44	67	54	82	57	75	54	69	53	53	50
14...	70	40	62	37	82	33	58	43	78	51	57	49	79	50	80	39	58	38	69	51	84	56	76	44	72	46	54	48
15...	83	42	69	39	86	34	90	39	86	54	72	50	84	48	88	40	67	39	72	51	89	57	85	46	72	48	59	47
16...	62	44	73	40	89	33	83	40	85	53	56	51	86	45	87	42	60	42	72	49	92	60	88	50	73	49	56	48
17...	64	42	64	53	74	48	60	48	73	51	56	51	81	44	88	44	59	39	61	49	77	47	65	48	62	47	55	48
18...	65	39	62	36	67	27	69	34	73	44	54	49	68	38	85	43	55	38	61	47	68	40	63	41	64	42	55	47
19...	59	49	52	46	63	36	55	39	66	49	55	50	63	42	80	34	52	47	55	50	69	51	60	40	57	51	52	48
20...	59	51	64	50	63	42	56	47	65	46	56	50	66	42	70	46	58	49	62	53	69	45	63	45	61	51	54	49
21...	62	44	62	52	66	29	61	46	71	45	55	52	67	38	70	35	58	49	61	50	69	40	61	41	64	48	54	49
22...	68	42	62	48	70	30	73	35	75	46	56	49	69	42	68	35	57	44	63	49	75	44	64	42	63	46	57	48
23...	72	45	67	37	77	28	82	36	71	43	78	52	74	36	70	36	62	41	79	48	76	46	72	36	76	43	68	50
24...	61	48	63	47	64	34	67	39	77	46	54	52	77	44	70	34	57	42	63	53	80	52	84	49	63	50	57	50
25...	68	41	63	51	60	34	68	47	69	55	54	51	68	53	72	36	54	37	58	51	73	53	66	50	59	52	54	46
26...	70	45	61	36	71	42	72	44	73	52	55	47	69	42	85	35	54	31	62	49	72	54	72	45	62	50	51	44
27...	76	38	64	33	83	34	85	37	74	47	63	50	77	46	85	40	62	34	67	47	79	59	81	42	69	43	55	45
28...	64	46	64	43	62	46	76	50	68	57	55	52	73	46	80	43	62	42	72	53	77	58	66	57	74	52	60	49
29...	60	49	56	51	57	46	66	43	62	52	54	51	65	50	65	32	58	47	59	51	72	49	58	45	60	49	58	52
30...	61	40	59	49	58	34	47	43	63	41	55	50	62	35	63	32	56	40	60	48	63	39	56	42	59	45	54	50
31...																												
Mns	67.6	46.6	65.9	45.5	77.3	39.3	73.0	43.8	78.5	53.0	59.0	51.5	77.5	49.5	81.9	42.4	59.7	43.2	68.3	51.9	80.7	53.9	73.8	49.1	69.3	50.1	57.1	48.9

TABLE 3.—*Maximum and minimum temperatures at selected stations for September, 1909. District No. 12*—Continued.

Date.	Walla Walla, Wash.		Oregon.																					
			Ashland.		Baker City.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.		Vale.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	86	65	78	59	73	61	81	57	60	45	92	54	62	52	85	55	76	53	77	54	88	56	88	61
2	75	66	82	59	71	56	86	57	58	47	86	66	67	52	85	59	71	56	89	56	84	66	82	61
3	85	65	90	59	72	55	84	49	62	51	90	60	65	55	82	56	80	50	92	52	90	57	83	59
4	85	57	92	62	77	49	92	55	60	49	89	52	68	52	92	61	75	50	95	54	88	58	88	49
5	91	63	88	59	78	51	90	56	66	51	94	52	69	54	93	62	80	48	94	55	93	55	87	53
6	91	66	89	61	76	56	89	57	64	47	95	55	64	54	85	60	82	48	91	56	92	59	83	50
7	91	67	83	58	81	58	86	48	66	50	92	56	74	52	75	55	82	48	82	48	88	58	87	58
8	88	63	82	53	86	51	77	52	65	45	90	62	73	59	79	55	80	41	84	50	84	57	92	48
9	87	60	80	53	85	50	78	51	71	48	90	53	75	49	73	56	84	42	74	53	80	54	95	44
10	64	51	68	56	61	41	69	54	65	56	76	58	64	55	65	55	59	46	68	47	70	57	79	51
11	70	48	70	42	59	40	68	49	65	44	75	53	64	46	68	53	75	33	71	45	71	54	81	40
12	79	52	80	43	69	39	75	43	76	43	86	45	67	43	75	48	84	43	79	41	83	45	79	35
13	80	56	85	50	75	43	76	45	69	46	85	48	66	48	72	56	78	37	83	45	82	51	88	35
14	84	54	88	51	75	43	79	43	86	44	86	42	73	45	79	53	80	36	85	43	83	51	89	40
15	90	56	96	55	83	45	85	48	76	45	91	43	93	45	86	55	87	39	92	46	88	48	91	38
16	93	58	87	55	86	48	84	50	64	47	94	45	66	46	83	54	85	42	85	50	86	49	92	35
17	66	49	71	52	58	41	69	43	61	52	71	51	67	46	63	49	60	40	68	46	75	53	86	52
18	67	43	75	40	68	34	59	37	71	45	72	37	66	40	66	41	68	27	73	38	70	42	71	29
19	69	52	75	49	68	48	70	48	68	44	73	42	68	40	61	51	68	41	72	48	68	52	79	44
20	65	51	69	56	60	42	63	53	62	51	69	44	65	54	64	51	54	47	66	50	66	51	73	45
21	65	50	67	42	56	36	65	45	62	44	71	48	63	46	66	49	57	29	68	46	65	45	67	39
22	69	45	79	40	62	31	69	37	78	52	71	39	66	40	69	41	68	27	76	38	70	40	72	25
23	81	41	87	59	70	34	82	37	66	45	73	33	77	45	80	50	80	30	91	40	78	38	77	25
24	81	48	70	50	78	43	80	46	60	51	84	39	61	51	63	52	80	33	65	44	72	43	86	33
25	69	56	55	50	70	50	59	52	56	50	75	48	58	52	60	52	62	48	61	54	67	55	84	61
26	74	53	65	49	69	45	66	50	64	47	75	50	62	45	68	47	57	47	67	49	72	54	79	41
27	79	50	73	40	77	45	79	45	60	41	82	40	70	43	81	50	73	30	78	47	79	45	87	30
28	75	60	69	52	62	54	79	45	58	45	77	50	59	50	76	54	69	50	73	51	74	57	73	56
29	66	49	60	42	60	46	62	49	60	51	78	37	64	45	59	51	57	39	60	44	66	52	67	49
30	63	45	58	42	57	37	65	48	66	42	68	36	66	43	63	51	59	36	63	42	64	43	66	42
31																								
Mns	77.6	54.6	77.0	51.3	70.4	45.7	75.5	48.3	65.5	47.3	81.7	47.9	67.4	48.2	73.8	52.7	72.3	41.2	77.4	48.1	77.9	51.6	80.7	44.9

WEATHER, FORECASTS, AND WARNINGS FOR THE MONTH.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

After more than two months of low and fluctuating barometric pressure over the tropical Atlantic and Gulf of Mexico, and attendant stagnated and unusually warm and dry weather over the interior of the United States, September opened with a resumption of average atmospheric pressure in the South and a more active movement of barometric areas over the North American Continent. The continental changes were indicated by the following special forecast that was issued August 29:

The week beginning Monday, August 30, will be one of moderate temperature generally in districts east of the Rocky Mountains. Rain will set in over the great corn growing States about the middle of the week and the rain area will move eastward to the Atlantic States by the close of the week. The rains will be followed by a period of cool weather for the season in middle and northern sections of the country.

During the period covered by the forecast there was a rapid succession of areas of high and low barometric pressure over middle and northern portions of the United States with alternating periods of cool, frosty weather, and rains from the Plateau region over the northern tier of States to the Atlantic. An area of low barometer that appeared over the Plateau region September 1 advanced over the Plains States on the 2d, the Mississippi Valley and the western Lake region on the 3d, and reached the Atlantic States Saturday the 4th, attended by moderate to heavy rains and followed by frost-producing temperatures in the more northern States from the upper Missouri Valley to New England. In Wisconsin many thousands of dollars damage was caused to the cranberry crop. Timely warnings were issued by the Weather Bureau, but the usual protection by flooding could not be employed owing to an insufficient supply of water in the reservoirs.

From the 5th to 7th heavy rains that fell on the southwest margin of an extensive area of high barometer caused considerable damage by flood in Colorado. Following the movement of the high area eastward over the Lake region and New England an area of low barometer advanced from the Plains States over the Mississippi and Ohio valleys to the middle Atlantic coast from the 8th to 10th, attended by general rains that supplemented the rains of the preceding week and practically ended a drought that had been particularly severe in the Middle Atlantic States. The rains were not sufficiently heavy, however, to replenish the water supply in streams. From the 8th to 10th a barometric depression advanced from the Alaska coast southeastward over the British Northwest Territory and drifted thence slowly eastward over the Rocky Mountains and Plains States to the Mississippi Valley by the 14th, and reached the Atlantic coast on the 16th, attended by showers and followed by cooler weather.

THE TROPICAL STORM OF SEPTEMBER 12–21.

During the first decade of the month pressure continued abnormally high over the Azores region and, except on the 6th and 7th, was high over and near the British Isles. This distribution of pressure, by increasing the strength of the northeast trade winds, promoted in the tropical regions of the southwestern Atlantic conditions favorable to the development of cyclonic disturbances. The barometer began to fall over the Lesser Antilles September 10, and from the 12th to 14th a depression of apparent slight intensity moved westward over the Caribbean Sea. On the morning of the latter date two centers of cyclonic action appeared, one north and the other south of the Island of Jamaica. By the following morning the northern depression had apparently dissipated and the one to the southward of Jamaica had increased in intensity and was moving northwestward toward the Yucatan Channel where it arrived the morning of the 17th. At that time the barometer at Pinar del Rio, Cuba, read 29.44 inches, the wind had attained a velocity of 60 miles an hour from the northeast and a twenty-four-hour rainfall of 7.88 inches was reported. Reports indicate that the storm damage in Pinar del Rio Province aggregated about $1,000,000. From a position off the western extremity of Cuba the storm center moved northwestward over the Gulf of Mexico and reached a point near the mouth of the Mississippi River on the morning of the 20th.

Advices issued from the 12th to 14th were based upon observations taken at considerable distances from the center of the disturbance and were necessarily limited to statements regarding its apparent location and probable course. Advices of the 15th stated that the disturbance was west of Jamaica and that it would probably move northwestward to the Yucatan Channel. On the following day, the 16th, Atlantic and Gulf shipping interests and ports were notified that the hurricane center was apparently moving slowly toward the west Cuban coast or the Yucatan Channel, and on the 17th the following was telegraphed:

Hurricane center has reached Pinar del Rio Province, Cuba, and apparently moving northward. Shipping in south Atlantic and east Gulf ports or due to sail for southeast coast waters advised to remain in port.

By the 18th the course of the storm was more clearly indicated and advices stated that the center of the hurricane was apparently advancing toward the central Gulf of Mexico. On this date storm warnings were ordered for the western Florida, Alabama, Mississippi, and eastern Louisiana coasts. On the 19th the storm warnings were extended to the northern Texas coast; middle Gulf ports were advised that the center of the tropical hurricane was apparently approaching the Louisiana coast and hurricane warnings were ordered for the Louisiana coast. Advices of the morning of the 20th stated that the hurricane center was near the mouth of the Mississippi River and would move northward over Louisiana.

At the regular 8 a. m., seventy-fifth meridian time, observation of the 20th the report from Burrwood, La., a Weather Bureau station at the mouth of the Mississippi, was missing and New Orleans, about 70 miles to the northwestward of the storm's vortex, was the nearest point from which a report was received. At that place the barometer was 29.68 inches, wind northeast and blowing at a rate of 36 miles an hour and a rainfall during the preceding twelve hours of 0.94 inch. It was calculated at that time that barometric pressure at the center of the storm was about 29 inches. The barometer fell steadily at New Orleans and at 8 p. m. read 29.22 inches, with wind from the southeast and blowing 48 miles an hour, with an extreme recorded velocity of 68 miles and a rainfall of 2.86 inches during the preceding twelve hours. The center of the storm was then west and probably within 50 miles of New Orleans.

At 3 a. m. of the 21st barometric pressure at Vicksburg, Miss., was 29.06 inches. By 8 a. m. of the 21st the center had advanced to a position over southeastern Arkansas, with lowest reported barometer 29.34 inches at Little Rock where the wind was from the north and an extreme velocity of 40 miles an hour had been recorded. Moving thence northward the center of disturbance reached west-central Illinois by 8 p. m., with pressure 29.40 inches at Springfield, Ill. By that time the storm had merged with a barometric depression that had moved eastward over the Plains States, and by the morning of the 22d a trough of low barometer extended from Lake Superior to the Rio Grande Valley, with lowest pressure 29.50 inches at Sault Sainte Marie, Mich. During the succeeding forty-eight hours the barometric trough moved eastward to the Atlantic coast attended by general rains that were heavy in localities and followed by an extensive area of high barometer and cool weather that carried the frost line to the northern portions of the middle Gulf States.

A full report on the effects of the above mentioned hurricane in the vicinity of New Orleans has been prepared by I. M. Cline, Official in Charge of the Weather Bureau office at that place, and appears in the summary of District No. 7, page 623.

At Mobile many vessels ran up the river about 12 miles for shelter and a number of those that remained at Mobile were sunk or damaged. The loss to shipping was estimated at $3,000. The damage to property in Mobile, mostly by high water, was estimated at $5,000. The estimated value of merchandise and goods that were saved by removal from wharfs and lower floors in stores was $400,000. At small towns on the Alabama coast the damage by wind and high tides was estimated at $6,000. At Coden the water in the town was about 3 feet deep. At points on the Mississippi coast the tides reached heights of 8 to 12 feet. The loss at Scranton was about $11,000 and at Biloxi about $43,000. At Gulfport and vicinity the damage by wind was about $7,000 and by tides about $150,000. The damage by wind at Pass Christian, Bay St. Louis and vicinity was about $20,000, and by high tides, including railroad losses, about $800,000. At these points the storm was considered the severest ever experienced. About 200 bath houses and 20 modern residences on the beach were demolished and many others damaged. Four large and six small fishing schooners were wrecked and numerous small boats were beached. Only three lives were lost on the Alabama and Mississippi coasts. The warnings that were sent along these coasts are said to have been instrumental in saving lives and much property.

The damage in Pensacola Bay, that was confined largely to small craft, wharfs, bath houses, etc., was estimated at $4,000. Warned of the approaching storm, many families left their homes along the bay shore and found safer quarters. Parties in the bathing pavilions on Santa Rosa Island were brought to the city. Steamers in the harbor kept up steam and small vessels and some of the fishing fleet anchored across the bay.

Following the passage over the continent of the tropical disturbance barometric pressure continued low over the Greater Antilles and the Florida Peninsula during the balance of the month. From the 21st to 24th an extensive area of high barometer moved from the north Pacific coast over the Lake region and central valleys, where it remained nearly stationary until the 27th, with heavy frost in the upper Lake region and upper Mississippi Valley the morning of the 27th, after which it settled southward over the Gulf States, with light frost in Tennessee the morning of the 29th.

A notable feature of the third decade of September was the prevalence over the Azores of exceptionally low barometric pressure. At Horta, Fayal, the barometer began to fall rapidly on the 25th, reached 29.40 inches on the 27th and rose very slowly to 29.50 inches by the morning of the 30th, with maximum reported wind velocity 52 miles an hour from the southwest on the 30th. The pressures thus noted were in the southern quadrants of a low barometer area that was central over the mid-Atlantic north of the Azores. The center of this low area evidently moved northward toward Iceland where a pressure of 28.78 inches was reported October 2.

Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since January 1.	Average departures since January 1.
		°	°	°	°
New England	12	60.4	− 0.2	+ 2.6	+ 0.3
Middle Atlantic	16	65.4	− 1.2	+ 7.5	+ 0.8
South Atlantic	10	71.9	− 1.2	+ 9.9	+ 1.1
Florida Peninsula*	8	79.2	0.0	+15.9	+ 1.8
East Gulf	11	75.9	+ 1.1	+10.4	+ 1.2
West Gulf	10	77.3	+ 1.9	+15.4	+ 1.7
Ohio Valley and Tennessee	13	67.4	− 0.9	+ 5.8	+ 0.6
Lower Lakes	10	61.2	− 1.7	+ 0.2	0.0
Upper Lakes	12	58.0	− 0.9	+ 6.1	+ 0.7
North Dakota*	8	58.8	+ 2.1	+ 1.0	+ 0.1
Upper Mississippi Valley	14	63.8	− 1.0	+ 3.2	+ 0.4
Missouri Valley	12	66.0	+ 0.7	+ 7.8	+ 0.9
Northern slope	9	58.5	+ 1.0	− 1.4	− 0.2
Middle slope	6	68.2	+ 0.6	+ 7.2	+ 0.8
Southern slope*	8	73.4	+ 0.5	+12.6	+ 1.4
Southern Plateau*	10	68.3	+ 0.2	− 4.9	− 0.5
Middle Plateau*	11	59.6	− 0.6	+ 3.3	+ 0.4
Northern Plateau*	11	60.0	+ 1.2	− 2.6	− 0.3
North Pacific	7	57.9	+ 1.0	− 9.3	− 1.0
Middle Pacific	5	64.9	+ 0.5	− 1.9	− 0.2
South Pacific	4	68.4	+ 1.1	− 0.2	0.0

Average precipitation and departures from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
		Inches.		*Inches.*	*Inches.*
New England	11	4.20	131	+ 1.0	+ 0.1
Middle Atlantic	16	2.58	76	− 0.8	+ 0.1
South Atlantic	11	2.79	57	− 1.9	− 5.8
Florida Peninsula*	8	4.54	56	− 3.4	− 1.4
East Gulf	11	3.73	77	− 0.2	+ 6.8
West Gulf	10	1.44	42	− 2.0	−11.1
Ohio Valley and Tennessee	13	2.81	104	+ 0.1	+ 3.1
Lower Lakes	10	2.34	82	− 0.5	+ 2.2
Upper Lakes	12	2.36	72	− 0.9	0.0
North Dakota*	8	1.04	68	− 0.5	+ 0.2
Upper Mississippi Valley	15	3.44	100	− 0.0	+ 0.6
Missouri Valley	12	3.76	73	+ 1.0	+ 2.1
Northern slope	9	1.38	82	− 0.3	+ 0.5
Middle slope	6	2.99	151	+ 1.0	− 1.5
Southern slope*	8	1.10	41	− 1.6	− 7.9
Southern Plateau*	10	1.61	159	+ 0.6	+ 0.6
Middle Plateau*	11	1.37	157	+ 0.5	+ 0.8
Northern Plateau*	11	1.33	143	+ 0.4	+ 0.3
North Pacific	7	1.09	44	− 1.4	− 3.4
Middle Pacific	7	0.67	118	+ 0.1	+ 6.8
South Pacific	4	0.02	9	− 0.2	+ 5.0

*Regular Weather Bureau and selected cooperative stations.

Average relative humidity and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	83	+ 2	Missouri Valley	70	+ 4
Middle Atlantic	75	− 2	Northern slope	65	+10
South Atlantic	79	− 1	Middle slope	64	+ 6
Florida Peninsula	80	− 2	Southern slope	60	− 3
East Gulf	77	+ 1	Southern Plateau	50	+11
West Gulf	65	− 9	Middle Plateau	50	+12
Ohio Valley and Tennessee	73	+ 1	Northern Plateau	53	+ 1
Lower Lakes	74	+ 1	North Pacific	80	+ 8
Upper Lakes	79	+ 2	Middle Pacific	61	− 6
North Dakota	74	+ 8	South Pacific	63	− 3
Upper Mississippi Valley	78	+ 6			

Average cloudiness and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	5.9	+ 0.7	Missouri Valley	4.2	+ 0.2
Middle Atlantic	5.2	+ 0.6	Northern slope	4.7	+ 0.7
South Atlantic	5.3	+ 0.6	Middle slope	3.2	− 0.2
Florida Peninsula	5.2	− 0.2	Southern slope	2.8	− 1.0
East Gulf	4.6	0.0	Southern Plateau	2.2	− 0.3
West Gulf	2.8	− 1.4	Middle Plateau	3.3	+ 0.4
Ohio Valley and Tennessee	4.5	+ 0.1	Northern Plateau	4.9	+ 1.3
Lower Lakes	5.2	+ 0.4	North Pacific	4.9	− 0.4
Upper Lakes	5.4	+ 0.2	Middle Pacific	3.6	+ 0.2
North Dakota	4.0	− 0.4	South Pacific	2.9	+ 0.3
Upper Mississippi Valley	4.5	+ 0.2			

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Buffalo, N. Y.	29	50	sw.	Pensacola, Fla.	20	64	se.
Do.	30	50	w.	Do.	21	60	nw.
Duluth, Minn.	20	54	sw.	Point Reyes Light, Cal.	9	58	nw.
Eastport, Me.	27	54	ne.	Do.	10	61	nw.
Mount Tamalpais, Cal.	19	51	nw.	Do.	20	68	nw.
Do.	23	62	sw.	Southeast Farallon, Cal.	10	51	nw
Do.	24	50	sw.	Do.	20	56	nw.
Nashville, Tenn.	21	60	se.	Do.	21	50	n.
New Orleans, La.	20	66	se.	Tatoosh Island, Wash.	23	52	e.
North Head, Wash.	23	60	s.	Toledo, Ohio.	22	50	s.
Do.	28	64	se.				

RAINFALL IN JAMAICA.

Through the kindness of Mr. Maxwell Hall, meteorologist to the government of Jamaica and now in charge of the meteorological service of that island, we have received the following data:

Comparative table of rainfall.

[Based upon the average stations only.]

SEPTEMBER, 1909.

Divisions.	Relative. area.	Number of stations.	Rainfall.	
			1909.	Average.
			Inches.	*Inches.*
Northeastern division	25	17	15.18	7.80
Northern division	22	41	12.70	5.37
West-central division	26	20	19.45	10.34
Southern division	27	26	16.50	6.33
Means	100	.....	15.66	7.44

The rainfall for the island for the month of September was therefore more than twice the average. This heavy rainfall was due to two barometric depressions; the first continued from the 13th to the 15th, inclusive, and moving from the west of Jamaica onwards, it swept the Cayman Islands, the northwest of Cuba, and devastated New Orleans. The second continued from the 22d to the 27th, and again moved from the west of Jamaica.

These rains were highly beneficial to Jamaica.

The heaviest rainfall, 36.34 inches, occurred at Point Hill in St. Catherine; the smallest, 4.81 inches, occurred at Buff Bay.

Grand Cayman, August, 1909.	Total fall.	Greatest fall.		Number of days on which 0.01 inch fell.
		Amount.	Date.	
East End	14.96	12.32	24	10
Bodden Town	7.05	6.25	24	4
Georgetown	13.11	6.00	24	15

RIVERS AND FLOODS.

The principal floods of the month occurred in the Rio Grande and in its tributaries in northern New Mexico. The heavy rains of August had left the ground in a more or less saturated condition, and during the first six days of September rains were frequent and at times heavy. Over the Zuni Mountain country of New Mexico there were heavy downpours on August 29 and 30, and on September 1, 4, and 5. The result was a vast volume of flood waters that rushed down the mountain sides, filling all the arroyos and canyons, and causing a great amount of damage. The dam of the Bluewater Development Company in Valencia County, N. Mex., was partially carried away, and the spillway of the Zuni Dam at Blackrock, McKinley County, was undermined for some distance. The officials at the dams were able to telephone notice of the disasters to places below, and no lives were lost. Estimates as to the amount of damage vary considerably. The railroads were the principal sufferers, as about 10,000 feet of track were washed away, and the roadbeds for several miles on either side softened. There was very little loss of livestock and crops, as the worst of the flood waters ran over raw and uncultivated lands.

The flood wave passed down the Rio Grande, the crest reaching San Marcial, N. Mex., on September 7, with a stage of 14 feet, 3 feet above the flood stage, and El Paso, Tex., on September 10, with a stage of 14.5 feet, 0.5 foot above the flood stage. The river at El Paso was at flood stage from September 9 to 13, inclusive.

Warnings were sent to El Paso on September 7, and repeated southward to the mouth of the river. Newspaper reports indicate that considerable damage was done along the lower river, mainly, however, by flood waters from the Mexican tributaries.

The usual seasonal low-water stages prevailed in the great rivers, but they were considerably higher than during the corresponding period of the preceding year, and, as a rule, they were ample for the purposes of navigation.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport on the Red.—*H. C. Frankenfield, Professor of Meteorology.*

SPECIAL PAPERS ON GENERAL METEOROLOGY.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

The following have been selected from among the titles of books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Most of them can be lent for a limited time to officials and employees who make application for them. Anonymous publications are indicated by a ——.

Austria. K. und k. Kriegsmarine.
... Jahrbuch der meteorologischen, erdmagnetischen und seismischen Beobachtungen. N. F. 13. Band. 1908. Pola. 1909. xxxv, 152 p. f°. (Veröffentlichungen des Hydrographischen Amtes der K. und k. Kriegsmarine in Pola. Gruppe 2.)

Beauchamp, R. de.
Essai de défense contre la grêle. Poitiers. 1908. 22 p. 8°.

Brodersen, Hans.
Berichte über Blitzschläge der Jahre 1884 bis 1899. Kiel. 1909. p. 51–275. 8°. (Hrsg. vom Naturwissenschaftlichen Verein für Schleswig-Holstein als Fortsetzung von: L. Weber, Berichte über Blitzchläge in der Provinz Schleswig-Holstein. 1.–4. Folge. Kiel 1885.)

Bunkofer, Wilhelm.
Entwurf eines Apparates für Beobachtung der Luftdruckschwankungen mit sehr starker Vergrösserung. Wertheim a. M. 1908. 7 p. 8°. (Wissenschaftliche Beilage zum Jahresbericht des Grossherzoglichen Gymnasiums zu Wertheim für das Schuljahr 1907–1908.)

Burgerstein, Alfred.
Die Transpiration der Pflanzen. Jena. 1904. x, 283 p. 8°.

Carrère, Jean.
La terre tremblante. Calabre et Messine 1907–1908–1909. Paris. 1909. 341 p. 12°.

Ficker, H. von.
Klimatographie von Tirol und Vorarlberg. Wien. 1909. 162 p. 4°. (Klimatographie von Oesterreich. Heft 4. Hrsg. von ... der K. k. Zentralstation für Meteorologie und Geodynamik.)

Gellens, H. *and others.*
La marée-tempête du 12 mars 1906 dans le bassin de l'Escaut maritime. Bruxelles. 1908. 62 p. 18 pl. 8°. (Extrait du 1 fascicule des Annales des travaux publics de Belgique, février 1908.)

Genoa. R. Istituto idrografico.
Riepilogo annuale delle osservazioni meteorologiche 1908. Genova. 1909. 17 p. f°.

Gräter, A. S.
Das neue Weltbild nach dem Niedergang der mechanischen Natur-

auffassung am Ende des zweiten nachristlichen Jahrtausends. Stuttgart. [1907.] 167 p. 12°.

Hands, Alfred.
Lightning and churches. London. 1909. 92 p. 8°.

Hagen, Friedrich von.
Wustrow, sein Klima und die Wettervorhersage. Brandenburg a. H. 34 p. 4°. (Inaug.-diss. —Rostock.)

Kaye, H. W.
The climate of Strathpeffer. London. 1909. 64 p. 12°.

Laska, W.
Sammlung von Formeln der reinen und angewandten Mathematik. Braunschweig. 1888–1894. xvi, 107 p. 8°.

Mahler, G.
Ueber Ionen und Elektronen. Stuttgart. 1908. 32 p. 8°. (Separatabdruck aus Neues Korrespondenzblatt für die Höheren Schulen Württembergs, fünfzehnter Jahrg., 1908. Heft 11–12.)

Makower, W. *and others.*
Investigations on the electrical state of the upper atmosphere. *In* Journal of the Institution of electrical engineers. London. Aug., 1909. p. 216.

Menger, Erich.
Der Sonnenschein in Russland. Berlin. 1909. 123 p. 8°. (Inaug.-diss.—Berlin.)

Podolia (Russia). Station expérimentale agronomique de Ploty.
Observations météorologiques 1908. Odessa. 1909. 59 p. 4°.

Querfurt, Heinrich.
Die Einwirkung der Winde auf die Strömungen im Skagerrak und Kattegat mit besonderer Berücksichtigung der am Leuchtschiff Skagens Riff angestellten Beobachtungen während der Jahre 1903–1905. Berlin. 1909. 9 p. 4°. (Inaug.-diss. —Münster.)

Reynolds-Ball, Eustace.
Mediterranean winter resorts. 6th edition. London. 1908. 646 p. 16°.

Rolet, A.
Les gelées et la grêle. 2 v. Paris. n. d. 16°.

Roster, Giorgio.
Climatologia dell' Italia nelle sue attinenze con l'igiene e con l'agricoltura preceduta da uno studio sui fattori climatici in genere. Torino. 1909. xxix, 1040 p. 8°.

Saxony. Königl. sächsische Landes-Wetterwarte.
Dekaden-Monatsberichte (Vorläufige Mitteilung) . . . 1908. Jahrg. 11. Dresden. 1909. 111 p. f°.
Deutsches meteorologisches Jahrbuch. 1904. Dresden. 1909. 183 (96) p. f°.

Schmiedeberg, Walter.
. . . Die mathematische Darstellung des täglichen Ganges der Lufttemperatur als Folge von Insolation und Ausstrahlung. Bielefeld. 1909. 19 p. 8°. (Wissenschaftliche Beilage zum 13. Jahresbericht 1908 der Oberrealschule zu Bielefeld.)

Vacher, Antoine.
Le Berry, contribution á l'étude géographique d'une région française. [Chap. 8. "Le climat."] Paris. 1908. 548 p. 8°.

Voorhees, J. F.
. . . The relation of the weather service to the farmers of Tennessee. Knoxville. 1910. 21 p. 8°. (Bulletin of the Agricultural experiment station of the University of Tennessee. No. 87. Jan., 1910.)

Wegener, Alfred.
Drachen- und Fesselballonaufstiege. Köbenhavn. 1909. 75 p. 4° (Danmark-ekspeditionen til gronlands Nordost-kyst 1906–1908. Bind 2. no. 1.)

Wiesbaden. Meteorologische Station.
Ergebnisse der meteorologischen Beobachtungen der Station II. Ordnung Wiesbaden 1908. Wiesbaden. 1909. 54 p. 8°.

Wilski, P.
Klimatologische Beobachtungen aus Thera unter Mitwirkung von F. Frhr. Hiller von Gaertringen und E. Vassiliu. Berlin. 1902–1909. viii, 55–202 p. f°. (Thera; Untersuchung, Vermessungen und Ausgrabungen in den Jahren 1895–1902 . . . Hrsg. von F. Frhr. Hiller von Gaertringen. 4er Band.)

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. FITZHUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a ——.

Geographical journal. London. v. 34. November, 1909.
—— The climate of Sweden in the post-glacial period. p. 569–570. [Abstract of paper by Gunnar Andersson.]
—— Nieve penitente in the Himalayas. p. 570–571.
Lees, A. Oldham. Cloud caps on snowy peaks. p. 573–579. [With note and drawing by C. Reginald Enock.]

Japan. Imperial earthquake investigation committee. Bulletin. Tokyo. v.3, no. 2. November, 1909.
Omori, F. Preliminary report on the Messina-Reggio earthquake of December 28, 1908. p. 37–45.
Omori, F. Note on the propagation velocity of the Formosa earthquakes of 1906 and 1908. p. 47–60.
Omori, F. On the dependence of the transit velocity of seismic waves on the nature of path. p. 61–67.

Mount Weather observatory. Bulletin. Washington. v. 2, pt. 3. 1909.
Humphreys, W. J. Certain laws of radiation and absorption and a few of their applications. p. 109–131.
Humphreys, W. J. An unusual display of false cirrus. p. 133–135.
Rotch, A. Lawrence. The acrological congress at Monaco. p. 136–144.

Nature. London. v. 82. 1909.
Aitken, John. Atmospheric cloudy condensation. p. 8. (Nov. 4.)
—— The upper air. p. 47–48. (Nov. 11.) [Abstract of report by Gold & Harwood.]
Aitken, John. The temperature of the upper part of clouds. p. 67. (Nov. 18.)
Chree, C. The measurement of solar radiation. p. 78. (Nov. 18.) [Abstract of paper by Bemporad.]

Royal astronomical society. Monthly notices. London. v. 70. November, 1909.
Maunder, E. Walter. Note on the cyclones of the Indian Ocean 1856–1867, and their association with solar rotation. p. 49–62.

Royal society. Proceedings. London. ser. A. v. 83. December, 1909.
Todd, George W. Thermal conductivity of air and other gases. p. 19–39.
T., F. T. Éleuthère Élie Nicolas Mascart, 1837–1908. p. 1–2. (Appendix.)
C., E. W. Georg von Neumayer, 1826–1909. p. 11–14. (Appendix.)

Science. New York. v. 30. December 24, 1909.
Knipp, Chas. T. A simple cloud apparatus. p. 930–932.

Symons's meteorological magazine. London. v. 44. December, 1909.
—— Sir Arthur Mitchell, K. C. B., M. D.
Curtis, R. H. The standardization of sunshine recorders. p. 204–206.
Bonacina, L. C. W. On rainfall in relation to wind-direction. p. 207–210.

Ciel et terre. Bruxelles. 30 année. 1909.
—— Les moyennes thermiques. p. 458–463. (1 déc.)
Davy, F. H. La sécheresse de l'air à l'intérieur des habitations au Canada. p. 475–482. (16 déc.)

Journal de physique. Paris. 4 sér. Tome 8. Octobre 1909.
Féry, C. Propriétés sélectives des corps noirs employés comme récepteurs dans la mesure de l'énergie rayonnante et conséquences qui en découlent. p. 758–770.

Nature. Paris. 38 année. 1909.
Dumas, Léon. Le feu follet. p. 30–31. (11 déc.)
Loisel, J. La pluie. p. 36–41. (18 déc.) [Illustrated.]

Annalen der Hydrographie und maritimen Meteorologie. Berlin. 37. Jahrgang. November 1909.
Pollitz, Theodor. Die Stürme im südlichen Indischen Ozean, eine Untersuchung ihrer Häufigkeit, Anfangsrichtung, Dauer, Winddrehung und Luftdruckverhältnisse. p. 529–553.

Beiträge zur Geophysik. Leipzig. 10. Band. Dezember 1909.
Fuchs, Karl. Die Fluthbewegungen in verschiedenen Tiefen des Meeres. p. 156–172.
Messerschmidt, J. B. Der tägliche Gang der erdmagnetischen Elemente und des luftelektrischen Potentialgefälles. p. 173–183.
Harboe, E. G. Mikrohomoseismen. p. 184–201.

Beiträge zur Physik der freien Atmosphäre. Leipzig. 3. Band. November 1909.
Wagner, Arthur. Die Temperaturverhältnisse in der freien Atmosphäre (Ergebnisse der internationalen unbemannten Ballonaufstiege). p. 57–167.

Himmel und Erde. Berlin. 22. Jahrgang. Dezember 1909.
Müller, Franz. In Nebel und Rauhreif. p. 129–137. [Illustrated with photographs of dew and frost deposits.]

Illustrierte aeronautische Mitteilungen. Strassburg. 13. Jahrgang. 1909.
Schreiber, Paul. Zur Technik der Pilotballon-Aufstiege. p. 1116–1122. (15 Dez.)
Wendt, J. Zur Technik meteorologischer Fesselballonaufstiege. p. 1150–1151.

Meteorologische Zeitschrift. Braunschweig. Band 26. November 1909.
Voeikov, A. Das Klima Indiens nach neuesten Daten. p. 481–496.
Wegener, Alfred. Über den v. Bezoldschen Satz von der abkühlenden Wirkung der Erdoberfläche. p. 496–500.

Héjas, E. Jahresgang der Gewitter in Ungarn auf Grund 10-jähriger Beobachtung (1896 bis 1905). p. 501–507.
—— Prof. Dr. Franz Augustin. p. 508–509.
Schmidt, Ad[olf]. Die magnetische Störung am 25. September 1909 zu Potsdam und Seddin. p. 509–511.
Kesslitz, W. v. Der erdmagnetische Sturm vom 25. September 1909, beobachtet in Pola. p. 512–513.
Dreis, J. Geruchswahrnehmungen bei der Wetterbeobachtungen. p. 517–519.
Börnstein, R. Bemerkungen über die halbtägige Luftdruckschwankung im arktischen Gebiete. p. 519–521.

Petermanns Mitteilungen. Gotha. 55. Band. 1909.
Meinardus, Wilh. Die mutmassliche mittlere Höhe des antarktischen Kontinents. p. 304–309.

Physikalische Zeitschrift. Leipzig. 10. Jahrgang. 1 Dezember 1909.
Wehner, H. Westwanderung seismischer und vulkanischer Aktivität. p. 962–965.
Laine, V. J. Der Einfluss des Donners auf die Regentropfen, durch eine seltene Regenbogenerscheinung ermittelt. p. 965–967.
Schmauss, A. Perlschnurblitz. p. 968.

Weltall. Berlin. 10. Jahrgang. 15 Dezember 1909.
Krebs, Wilhelm. Granulationen der Sonnenoberfläche als Folgeerscheinungen wellenartiger Vorgänge in der Erdatmosphäre. p. 87–90.

Wetter. Berlin. 26. Jahrgang. November 1909.
Wegener, Alfred. Probleme der Aerologie. p. 241–255. [Discusses vertical temperature gradients in the light of aerological observations, and the effect thereon of atmospheric stratification. Gives profile of the atmosphere to 400 km. altitude.]
Grossmann, L. Die Förderung unserer Wettervorhersage. p. 261–264.

Russia. Meteorologicheskiĭ viestnik. S.-Peterburg. Tom 19. August-September. 1909.
Voeikov, A[leksandr Ivanovich]. Biografia M. A. Rykacheva. [Biography of M. A. Rykachev. In Russian. With portrait.] p. 259–265.

Schweizer. Aero-Club. Bulletin. Bern. 3. Jahrgang. Deezmber 1909.
Maurer, J. Die meteorologische Situation vom 1 bis 4. Oktober 1909. p. 221–225. [Describes special meteorological service in connection with international aeronautical meeting at Zurich.]

Reale accademia dei Lincei. Atti. Roma. v. 18. 21 noviembre 1909.
Lo Surdo, Antonino. Sulle osservazioni sismiche. p. 439–444.

Società aeronautica Italiana. Bolletino. Roma. Anno 6. Oct.-Nov. 1909.
Eredia, Filippo. I venti in Italia. p. 361–367.
Riabouchinsky, D. Méthode nouvelle pour l'étude de la circulation de l'atmosphère. p. 374–377. [Illustrated.]

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given, for the various sections of the Climatological Service of the Weather Bureau, the average temperature and rainfall, the stations reporting the highest and lowest temperatures with dates of occurrence, the stations reporting the greatest and least monthly precipitation, and other data, as indicated by the several headings.

The mean temperatures for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperature and precipitation are based only on records from stations that have ten or more years of observations. Of course the number of such records is smaller than the total number of stations.

Temperature and precipitation by sections, September, 1909.

Section.	Temperature—in degrees Fahrenheit.								Precipitation—in inches and hundredths.					
			Monthly extremes.								Greatest monthly.		Least monthly.	
	Section average.	Departure from the normal.	Station.	Highest.	Date.	Station.	Lowest.	Date.	Section average.	Departure from the normal.	Station.	Amount.	Station.	Amount.
Alabama	73.7	− 0.4	Hamilton, Pushmataha	101	9, 4	Oneonta	35	29	2.87	− 0.43	Union Springs	8.06	Greenville	0.45
Arizona	73.5	− 1.1	Parker	110	9	Flagstaff, B	28	30	1.09	+ 0.07	Fort Apache	3.06	Sentinel	0.10
Arkansas	74.7	+ 1.5	Ozark, Texarkana	108	3, 10	Bergman	31	28	2.84	− 0.77	Newport	8.05	Fort Smith	0.38
California	68.2	+ 0.5	Shasta	109	15	3 stations	23	22, 30	0.52	+ 0.03	Helen Mine	3.57	65 stations	0.00
Colorado	57.1	− 1.1	Lamar	100	1	Breckenridge	7	22	2.62	+ 1.52	Santa Clara	7.42	Silt	0.53
Florida	78.5	− 0.6	De Funiak Springs, Wausau	98	11, 3 d't's	Mount Pleasant, Newport	42	29, 29	4.09	− 3.10	Hypoluxo	18.16	Plant City	0.75
Georgia	74.2	− 0.8	Blakely	101	5	Gore	36	29	3.17	− 0.57	Butler	9.51	West Point	0.24
Hawaii	75.0	.....	Kihei, Maui	93	16, 17	Humuula, Hawaii	37	18, 21	3.89	.....	Honomanu Valley	17.89	3 stations	0.00
Idaho	58.2	+ 1.6	Kooskia, Pleasant Valley	99	25, 8	McCall	9	22	1.95	+ 0.77	Irwin	4.09	Milner	0.06
Illinois	64.8	− 1.9	Mascoutah, Tilden	100	3	Lanark	28	27	3.74	+ 0.45	Cobden	9.17	Zion	1.05
Indiana	64.2	− 2.5	Rome	95	12, 19	Cambridge C'y Paoli	28	28	2.68	− 0.17	Columbus	4.95	Vevay	0.75
Iowa	62.4	− 1.3	4 stations	94	12, 13	4 stations	30	24, 27	3.58	+ 0.17	Thurman	7.34	Gilman	1.39
Kansas	69.9	+ 1.0	Ashland	107	2	Blakeman	26	24	3.19	+ 0.38	Lawrence	11.49	Hugoton	0.40
Kentucky	67.7	− 2.8	Paducah	97	12	Anchorage, Greensburg	32	28	2.51	− 0.07	Blandville	5.79	Owenton	0.80
Louisiana	77.5	+ 0.2	Liberty Hill	105	10	Robeline	36	28	4.97	+ 1.24	St. Francisville	14.07	Sugartown	0.61
Maryland and Delaware	65.9	− 1.9	Cambridge, Md	92	23	Chewsville, Md	33	28	3.37	− 0.10	Sudlersville, Md	5.71	Chewsville, Md	1.18
Michigan	58.6	− 1.7	8 stations	94	13, 14	Humboldt	17	27	2.04	− 1.03	Midland	5.03	Iron Mountain	0.54
Minnesota	58.7	0.0	4 stations	89	10, 11	Roseau	22	24	3.16	+ 0.25	Red Wing	7.38	Hallock	0.82
Mississippi	75.8	+ 0.3	Rosedale	103	9	6 stations	39	28, 29	4.22	+ 0.91	McNeill	8.49	Aberdeen	0.75
Missouri	68.7	− 0.4	Dean	105	11	Warsaw	28	26	4.62	+ 0.94	Lexington	12.04	Springfield	0.69
Montana	56.7	+ 1.6	Troy	100	5	Grayling	14	23	2.59	+ 1.34	Half Way House	5.81	Wolf Point	0.00
Nebraska	63.8	− 0.1	Franklin	104	10	Gordon	24	24	2.96	+ 0.76	Edgar	8.49	Canton	0.34
Nevada	60.5	+ 0.4	Las Vegas	100	10	Carlin	16	21	0.73	+ 0.32	Columbia	2.47	5 stations	0.00
New England*	59.8	− 0.4	St. Johnsbury, Vt., Waterbury, Conn	86	21, 14	Grafton, N. H	24	20	5.02	+ 1.01	Debsconeag, Me	10.27	Fall River, Mass	3.06
New Jersey	64.5	− 1.9	Phillipsburg	89	14	Layton	30	29	3.30	− 0.73	Tuckerton	4.38	Elizabeth	2.08
New Mexico	63.3	− 1.3	3 stations	98	1, 2	Elizabethtown	14	22	1.76	+ 0.17	Raton	6.30	Orogrande	0.08
New York	59.5	− 1.2	Addison, Otto	96	14, 15	Gabriel	22	19	2.96	− 0.31	Volusia	5.91	Youngstown	1.45
North Carolina	68.7	− 2.1	Lumberton	93	16, 23	Banners Elk	29	28	2.96	− 0.91	Rock House	9.67	Belhaven	0.83
North Dakota	59.0	+ 2.7	Forman	93	10	Cando	24	24	0.86	− 0.65	New England	2.04	Pratt	0.00
Ohio	63.2	− 2.3	Rocky Ridge	95	13	Bladensburg	25	28	1.78	− 1.10	Oberlin	4.21	Demos	0.63
Oklahoma	74.5	+ 1.3	Chickasha, Muskogee	107	10, 11	Blackburn, Healdton	31	29, 28	1.17	− 1.88	Woodward	4.88	Wagoner	0.02
Oregon	66.4	+ 1.8	Fairview	105	5	Christmas Lake	15	22	1.39	− 0.41	Pompeii	5.43	3 stations	0.00
Pennsylvania	62.8	− 1.1	Lawrenceville	96	14	Skidmore	26	28	2.27	− 0.86	Gettysburg	4.90	Davis Island Dam	0.64
Porto Rico	79.4	+ 0.2	Arecibo	99	22	Arecibo, Maricao	60	16, 24	6.77	− 1.64	Las Marias	18.32	Dorado	1.70
South Carolina	72.0	− 2.1	Anderson	98	1	Dillon, Trial	39	29	3.74	− 0.15	Walhalla	8.00	Columbia	1.04
South Dakota	61.8	+ 0.3	Ashcroft, Belle Fourche	97	27, 30	Pollock	25	24	1.59	− 0.22	Centerville	5.85	Lemmon	0.29
Tennessee	69.6	− 1.1	Bolivar	98	3	Rugby	28	28	3.67	+ 0.78	Lynnville	6.96	New River	0.97
Texas	77.3	+ 1.1	4 stations	108	20, 21	3 stations	34	28, 30	1.03	− 2.21	Victoria	4.25	7 stations	0.00
Utah	60.1	− 1.2	Hite	96	3	Strawberry Valley	20	22	1.69	+ 0.60	Millville	4.05	Milford	0.03
Virginia	65.8	− 2.2	Saxe, Lincoln	90	1, 7	Burkes Garden	27	28	2.71	− 0.70	Burkes Garden	5.50	Norfolk	0.56
Washington	60.8	+ 1.6	3 stations	99	1, 5	Wilbur	23	22	1.38	− 6.77	Goat Lake	6.39	Kiona	0.03
West Virginia	63.8	− 2.2	Moundsville	94	14	5 stations	28	28	2.74	+ 0.16	Princeton	8.75	Wheeling	0.63
Wisconsin	58.8	− 1.5	Sauk City	90	13	Long Lake	20	26	3.07	− 0.50	Mondovi	6.98	Lake Mills	1.52
Wyoming	54.3	+ 0.5	4 Stations	90	5 d't's	Towers Falls, Y. N. P.	9	22	1.68	+ 0.60	Upton	4.86	Basin	0.36

*Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. †Other dates also.

TABLE 1.—*Climatological data for U. S. Weather Bureau stations, September, 1909.*

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.									Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.
	Barometer above sea level, feet.	Thermometers above ground.	Anemometer above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.				Total.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.					
New England.							**60.4**	**− 0.2**										**83**	**4.20**	**+ 1.0**									**5.9**	
Eastport	76	67	85	30.03	30.12	+ .09	56.0	+ 0.8	71	3	62	44	20	50	24	53	51	86	6.40	+ 3.4	11	7,203	s.	54	ne.	27	5	7	18	7.4	
Greenville	1,070	6	....	28.95	30.12	.....	54.2	.....	75	4	65	27	8	43	40	....	.....	....	10.12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	103	81	117	29.99	30.11	+ .06	58.8	− 0.8	78	3	66	41	20	51	25	54	51	82	4.68	+ 1.5	12	5,789	s.	30	s.	4	8	12	10	5.3	
Concord	288	70	79	29.80	30.11	+ .05	59.0	− 0.1	82	23	70	33	20	48	37	....	.....	....	4.15	+ 0.9	12	3,154	se.	25	nw.	5	9	7	14	5.8	
Burlington	404	11	48	29.66	30.09	+ .03	58.1	− 0.8	81	14	68	36	19	49	35	....	.....	....	4.36	+ 1.0	12	7,671	s.	38	s.	1	6	11	13	6.3	
Northfield	876	16	70	29.18	30.13	+ .07	54.7	+ 0.1	80	14	66	29	19	43	42	51	49	84	3.05	+ 0.3	14	5,500	s.	29	nw.	5	8	11	11	6.1	
Boston	125	115	188	29.98	30.12	+ .05	62.6	− 0.1	82	3	70	46	20	55	28	58	56	82	5.15	+ 2.0	12	6,093	e.	28	w.	5	8	9	13	5.9	
Nantucket	12	14	90	30.09	30.10	+ .02	63.2	+ 0.4	79	23	69	53	13	58	20	60	58	87	3.71	+ 1.0	8	9,920	sw.	37	ne.	26	8	11	11	6.0	
Block Island	26	11	46	30.08	30.11	+ .03	63.1	− 1.0	76	23	68	54	2	58	17	59	57	85	3.68	+ 0.7	10	10,368	sw.	48	nw.	5	10	9	11	5.2	
Narragansett	.....	9	.....	.....	.....	.....	62.2	− 0.6	77	23	71	43	6	53	32	.....	.....	.....	3.85	.....	10	.....	ne.	.....	.....	.....	14	6	10	.....	.....
Providence	160	141	165	29.95	30.12	+ .05	62.0	− 1.2	81	3	72	42	20	52	31	57	55	82	3.28	+ 0.1	11	6,035	n.	40	nw.	5	9	9	12	5.6	
Hartford	159	122	140	29.94	30.11	+ .04	62.5	+ 0.8	82	14	72	43	29	53	32	56	53	78	3.83	+ 0.3	10	4,995	s.	30	s.	4	7	7	16	6.5	
New Haven	106	116	155	29.99	30.10	+ .03	62.8	− 1.1	78	23	72	42	29	54	28	57	54	77	3.93	+ 0.1	10	6,406	n.	34	nw.	5	11	11	8	4.9	
Mid. Atlantic States.							**65.4**	**− 1.2**										**75**	**2.53**	**− 0.3**									**5.2**	
Albany	97	102	115	30.01	30.11	+ .04	62.2	− 0.1	85	14	71	40	29	53	33	56	52	75	2.88	− 0.3	9	5,344	s.	32	sw.	4	9	11	10	5.6	
Binghamton	871	78	90	29.19	30.12	+ .05	59.6	− 0.4	88	14	70	34	29	49	40	....	.....	....	1.81	− 1.0	7	3,690	s.	24	sw.	4	9	7	14	6.0	
New York	314	108	350	29.77	30.10	+ .02	65.6	− 0.9	79	3	72	48	29	59	23	59	56	75	2.66	− 0.9	7	7,335	nw.	45	nw.	5	10	9	11	5.3	
Harrisburg	374	94	104	29.72	30.12	+ .04	65.2	+ 0.3	82	8	74	44	29	57	28	57	51	67	2.62	− 0.2	5	4,564	n.	26	nw.	5	15	5	10	4.1	
Philadelphia	117	116	184	30.00	30.12	+ .04	67.2	− 0.2	81	8	75	52	27	60	23	59	55	72	3.55	+ 0.2	8	6,583	nw.	30	n.	5	11	10	9	5.2	
Scranton	805	111	119	29.26	30.12	+ .05	62.2	0.0	91	14	72	37	29	52	36	55	50	69	1.80	− 1.1	6	4,654	ne.	31	nw.	5	11	6	13	5.3	
Atlantic City	52	37	48	30.06	30.11	+ .04	66.0	− 1.6	83	5	72	46	29	60	25	61	58	77	3.61	+ 0.6	5	6,120	s.	26	s.	10	8	7	15	5.8	
Cape May	17	48	52	30.11	30.13	+ .06	66.0	− 3.0	80	5	72	49	29	60	24	62	.....	....	2.62	− 0.4	7	6,182	n.	30	s.	10	7	18	5	4.6	
Baltimore	123	100	113	29.98	30.11	+ .03	67.7	− 0.9	82	17	76	47	29	60	27	60	55	69	3.97	+ 0.1	5	5,122	n.	32	n.	24	12	8	10	4.9	
Washington	112	62	85	29.99	30.11	+ .03	66.4	− 1.7	84	23	76	42	29	57	31	59	55	74	3.42	− 0.2	6	4,388	n.	25	nw.	5	8	12	10	5.4	
Cape Henry	18	9	58	30.08	30.10	+ .04	70.0	− 1.8	82	1	75	54	27	65	23	....	.....	....	0.78	− 3.3	5	11,111	ne.	48	n.	27	9	7	14	6.1	
Lynchburg	681	83	88	29.38	30.12	+ .04	66.7	− 1.7	85	1	76	40	28	57	33	60	57	78	2.65	− 1.0	6	2,361	n.	17	nw.	1	6	15	9	5.8	
Mount Weather	1,725	10	54	28.30	30.10	+ .03	61.3	− 1.1	76	23	69	40	28	54	23	56	52	78	2.58	− 0.3	6	8,144	nw.	43	nw.	30	14	9	7	4.4	
Norfolk	91	102	111	30.00	30.10	+ .04	69.7	− 2.0	88	23	76	52	29	63	27	63	60	77	0.56	− 3.5	7	6,372	ne.	25	ne.	19	7	9	14	6.0	
Richmond	144	145	153	29.96	30.11	+ .04	67.4	− 3.4	85	1	76	47	28	59	25	....	.....	....	2.89	− 0.5	7	5,548	n.	28	n.	5	5	19	6	5.5	
Wytheville	2,293	40	47	27.76	30.11	+ .04	62.5	− 1.1	81	15	72	36	28	53	37	57	55	84	2.83	− 0.5	10	2,757	e.	21	sw.	4	12	13	5	4.0	
S. Atlantic States.							**71.0**	**− 1.2**										**79**	**2.70**	**− 1.0**									**5.3**	
Asheville	2,255	53	75	27.78	30.11	+ .04	64.4	− 0.6	83	11	74	35	29	55	38	58	56	83	2.59	− 0.4	9	4,665	se.	26	e.	19	11	12	7	4.8	
Charlotte	773	68	76	29.27	30.10	+ .03	69.0	− 1.7	87	11	78	47	28	60	28	62	58	74	2.06	− 1.2	8	4,339	ne.	23	ne.	26	9	10	11	5.4	
Hatteras	11	12	47	30.04	30.06	.00	72.8	− 1.9	85	5	78	57	30	68	19	68	66	82	1.35	− 4.0	5	10,372	ne.	49	n.	27	14	10	6	4.6	
Manteo	12	12	46	.....	.....	.....	70.4	.....	84	24	76	49	30	64	....	.....	.....	....	1.38	− 4.0	3	.....	ne.	.....	.....	.....	19	6	5	.....	.....
Raleigh	376	103	110	29.69	30.09	+ .02	68.7	− 1.9	88	1	78	46	28	60	29	61	58	77	4.52	+ 1.2	8	4,999	ne.	22	ne.	26	6	12	12	5.9	
Wilmington	78	81	91	29.99	30.07	+ .02	71.0	− 2.1	88	5	79	48	29	63	26	65	63	81	1.23	− 4.0	10	5,441	ne.	28	n.	27	5	16	9	5.8	
Charleston	48	14	92	29.99	30.04	.00	74.3	− 1.9	93	1	80	54	29	69	20	69	68	84	5.35	− 0.1	11	8,286	ne.	34	n.	27	7	17	6	4.8	
Columbia, S. C.	351	41	57	29.69	30.06	+ .01	73.0	− 0.7	90	1	82	46	29	64	32	64	60	72	1.04	− 2.4	7	4,888	ne.	28	ne.	26	10	7	13	5.6	
Augusta	180	89	97	29.86	30.05	.00	74.2	− 0.2	92	1	83	44	29	65	34	65	62	75	1.30	− 2.4	7	4,336	ne.	28	ne.	26	8	10	12	5.7	
Savannah	65	81	89	29.97	30.04	+ .01	74.4	− 1.0	94	5	81	53	28	68	24	68	65	80	4.90	− 0.7	10	7,560	ne.	34	e.	19	6	15	9	5.4	
Jacksonville	43	96	129	29.95	30.00	.00	77.0	− 0.3	91	1	84	56	28	70	19	71	69	81	4.98	− 3.0	9	6,072	e.	27	n.	25	8	18	4	4.8	
Florida Peninsula.							**80.1**	**− 0.2**										**80**	**5.07**	**− 2.6**									**5.2**	
Jupiter	28	10	46	29.90	29.93	− .03	80.1	− 0.5	91	1	86	70	13	75	17	75	73	80	7.59	− 2.0	14	7,709	e.	32	se.	18	8	16	6	5.4	
Key West	22	10	53	29.87	29.89	− .05	80.6	− 1.9	88	12	86	72	26	75	15	76	74	80	6.35	− 0.4	16	6,278	ne.	30	se.	17	5	20	5	5.5	
Sand Key	25	41	71	29.85	29.88	− .05	80.5	.....	90	21	84	68	28	77	14	....	.....	....	4.04	− 2.8	11	10,587	ne.	48	e.	17	7	17	6	5.3	
Tampa	35	79	96	29.92	29.95	− .02	79.7	+ 1.4	92	8	88	60	29	71	24	72	70	81	2.30	− 5.1	12	5,518	ne.	29	ne.	19	7	20	3	4.8	
East Gulf States.							**75.9**	**+ 1.1**										**77**	**3.73**	**− 0.3**									**4.6**	
Atlanta	1,174	190	216	28.85	30.07	+ .02	71.7	− 0.4	88	11	80	46	28	64	23	64	60	74	1.65	− 1.9	8	7,044	ne.	29	e.	21	13	9	8	4.7	
Macon	370	78	87	29.65	30.04	+ 0.1	74.3	+ 1.4	93	5	84	44	29	65	36	....	.....	....	2.47	− 0.9	11	4,397	ne.	30	ne.	26	8	13	9	5.4	
Thomasville	273	8	57	29.71	30.01	.00	76.8	0.0	95	5	87	45	29	66	34	69	67	83	6.07	+ 1.8	12	3,385	e.	24	nw.	17	8	16	6	5.1	
Pensacola	56	79	96	29.93	29.99	.00	77.8	− 0.1	91	5	84	54	28	71	21	....	.....	....	2.25	− 3.0	7	9,036	n.	64	se.	20	11	16	3	4.6	
Anniston	741	9	57	29.29	30.07	+ .04	73.4	+ 2.1	90	11	83	40	28	63	38	....	.....	....	1.19	− 2.3	10	4,216	se.	25	se.	21	10	6	14	5.7	
Birmingham	700	11	48	29.30	30.05	+ .02	74.6	+ 0.6	92	12	84	44	28	65	32	66	63	76	1.61	− 1.9	6	4,791	n.	38	se.	21	8	12	10	5.2	
Mobile	57	98	106	29.93	29.99	− .01	78.8	+ 2.3	95	5	87	52	28	70	25	70	68	77	5.42	+ 0.4	12	5,443	n.	47	se.	21	9	20	1	4.3	
Montgomery	223	100	112	29.78	30.03	+ .01	76.6	+ 0.8	95	5	86	48	28	67	33	68	64	74	1.59	− 1.3	8	4,600	e.	26	se.	21	11	12	7	4.3	
Meridian	375	84	93	29.62	30.01	− 0.1	75.2	+ 2.5	94	4	86	43	28	65	36	67	63	75	6.18	+ 2.7	11	3,862	n.	35	e.	20	14	14	2	4.0	
Vicksburg	247	62	74	29.74	30.02	.00	76.0	+ 1.2	95	7	86	46	28	66	26	67	64	76	4.96	+ 1.6	7	4,514	n.	48	ne.	21	19	9	2	3.4	
New Orleans	51	90	121	29.92	29.98	.00	79.4	+ 1.4	93	4	86	56	28	73	17	73	72	84	7.68	+ 2.9	9	5,662	n.	66	se.	20	14	14	2	3.6	
West Gulf States.							**77.3**	**+ 1.0**										**65**	**1.44**	**− 2.0**									**2.8**	
Shreveport	249	77	84	29.75	30.02	+ .02	77.1	+ 1.4	99	10	88	44	28	66	32	66	62	67	1.46	− 1.8	6	4,584	ne.	38	w.	22	19	8	3	2.8	
Bentonville	1303	11	44	28.70	30.05	+ .03	72.6	+ 3.7	101	11	86	37	28	59	40	....	.....	....	1.39	− 2.1	5	3,257	sw.	17	w.	13	21	5	4	3.0	
Fort Smith	457	79	94	29.55	30.02	+ .01	76.4	+ 3.7	104	11	89	42	28	64	42	63	55	55	0.38	− 2.8	5	4,706	e.	25	sw.	6	18	5	7	3.3	
Little Rock	357	139	147	29.66	30.03	.00	74.8	+ 1.7	98	3	85	46	28	65	31	64	59	66	3.17	− 0.1	6	6,101	ne.	40	n.	21	14	12	4	3.6	
Brownsville	57	4	....	.....	.....	.....	79.3	.....	94	20	88	51	29	70	35	....	.....	....	1.21	.....	4	.....	e.	.....	.....	.....	.....	.....	.....	.....	.....
Corpus Christi	20	69	77	29.96	29.98	+ .03	78.9	− 0.1	99	21	86	54	28	72	25	71	67	73	1.11	− 2.9	4	8,008	se.	30	ne.	23	24	5	1	2.1	
Fort Worth	670	106	114	29.33	30.03	+ .04	78.2	+ 1.5	100	10	89	49	28	67	33	....	.....	....	2.08	− 0.9	2	6,130	s.	25	n.	23	24	6	0	1.9	
Galveston	54	106	112	29.95	30.01	+ .03	79.7	+ 0.3	91	1	85	58	28	75	16	71	68	70	2.50	− 2.9	6	7,249	se.	34	nw.	20	21	7	2	3.0	
Palestine	510	73	79	29.48	30.00	+ .01	78.1	+ 3.4	99	10	89	49	28	67	28	65	59	62	1.55	− 1.6	4	4,876	ne.	48	sw.	22	15	9	6	3.6	
San Antonio	701	80	91	29.27	29.98	+ .02	79.0	+ 1.9	100	22	90	51	29	68	35	66	59	60	0.56	− 2.4	5	4,486	se.	26	n.	22	17	11	2	3.2	
Taylor	583	55	63	29.42	30.03	+ .06	78.0	+ 1.1	97	22	90	47	29	66	39	....	.....	....	0.21	− 2.8	3	5,257	s.	20	n.	23	26	3	1	1.8	
Ohio Val. and Tenn.							**67.4**	**− 0.9**										**73**	**2.81**	**+ 0.1**									**4.5**	
Chattanooga	762	106	112	29.29	30.09	+ .03	71.2	0.0	90	1	80	45	29	62	31	63	59	72	4.44	+ 1.2	8	4,217	ne.	33	se.	21	10	11	9	5.2	
Knoxville	996	93	100	29.04	30.09	+ .03	69.0	− 0.4	86	12	78	40	28	60	31	62	58	76	2.91	+ 0.1	8	3,448	ne.	22	se.	21	13	8	9	4.7	
Memphis	399	76	97	29.65	30.07	+ .04	73.2	+ 0.4	94	3	82	47	28	65	25	64	60	71	4.09	+ 1.0	7	5,186	ne.	40	nw.	22	16	6	8	3.8	
Nashville	546	168	191	29.51	30.09	+ .03	70.8	− 0.7	90	12	80	45	29	61	32	64	61	77	4.23	+ 0.6	8	6,539	ne.	60	se.	21	14	11	5	3.9	
Lexington	989	75	102	29.05	30.11	+ .04	65.6	− 2.3	87	12	75	38	27	56	28	....	.....	....	4.88	+ 2.5	8	5,507	n.	40	nw.	9	15	8	7	4.5	
Louisville	525	111	132	29.53	30.11	+ .05	69.2	− 0.7	92	12	80	42	27	59	30	60	55	67	2.18	− 0.4	6	5,549	n.	34	se.	21	14	9	7	4.1	
Evansville	431	72	82	29.62	30.09	+ .03	69.2	− 0.5	90	12	79	42	27	59	28	....	.....	....	2.30	− 0.4	9	5,050	ne.	32	s.	21	13	16	1	3.8	
Indianapolis	822	154	164	29.23	30.12	+ .06	64.3	− 2.4	87	13	74	38	28	54	31	57	53	71	2.15	− 0.9	9	6,014	ne.	42	e.	21	15	9	6	4.3	
Cincinnati	628	152	160	29.44	30.11	+ .04	67.2	− 1.8	90	13	77	42	27	57	31	58	53	65	1.39	− 0.9	6	4,418	n.	29	se.	21	14	10	6	4.1	
Columbus	824	173	222	29.25	30.12	+ .05	64.1	− 1.8	88	13	74	40	28	54	30	57	52	72	1.81	− 0.7	7	7,048	n.	40	sw.	29	15	8	7	4.3	
Pittsburg	842	336	352	29.21	30.11	+ .03	65.1	− 1.0	87	13	75	39	28	55	31	56	51	68	0.76	− 1.7	8	6,302	n.	38	s.	29	13	11	6	4.5	
Parkersburg	638	77	84	29.47	30.12	+ .04	65.6	− 0.5	89	14	76	39	28	55	33	59	56	79	1.14	− 1.6	6	3,570	n.	22	s.	29	11	12	7	5.4	
Elkins	1,940	41	50	28.10	30.10	+ 0.6	61.4	− 0.5	85	15	74	32	28	49	41	54	52	87	4.30	+ 1.4	8	1,939	n.	15	se.	21	8	13	9	5.5	
Lower Lake Region.							**61.2**	**− 1.7**										**74**	**2.34**	**− 0.5**									**5.2**	
Buffalo	767	178	206	29.27	30.10	+ .04	61.6	− 1.3	86	14	69	44	28	54	34	55	51	72	2.61	− 0.6	11	9,084	s.	50	sw.	29	9	11	10	5.6	
Canton	448	10	71	29.61	30.09	.....	57.3	− 2.0	86	14	68	36	19	47	33	....	.....	....	3.25	+ 0.4	12	6,848	sw.	34	sw.	6	7	14	9	5.7	
Oswego	335	76	91	29.72	30.08	+ .02	60.2	− 2.5	85	14	68	42	29	52	29	55	52	78	2.56	− 0.2	8	7,046	s.	31	nw.	5	11	6	13	5.2	
Rochester	553	86	102	29.54	30.11	+ .05	61.2	− 0.7	91	14	71	40	28	52	37	54	51	75	1.86	− 0.5	11	4,947	s.	28	w.	30	7	9	14	6.0	
Syracuse	597	97	113	29.46	30.10	+ .03	60.7	− 0.9	87	14	70	43	28	52	30	....	.....	....	1.68	− 1.1	9	7,418	s.	39	s.	22	11	11	8	5.3	
Erie	714	92	102	29.33	30.10	+ .04	62.4	− 1.5	83	14	69	46	6	56	24	56	52	73	3.70	+ 0.2	9	7,446	s.	35	s.	22	10	10	10	5.5	
Cleveland	762	190	201	29.29	30.11	+ .05	62.1	− 2.2	86	14	69	42	28	55	26	56	52	72	3.40	+ 0.2	10	10,110	se.	42	nw.	30	11	9	10	5.3	
Sandusky	629	62	70	29.42	30.10	+ .04	63.4	− 1.9	86	14	71	41	28	56	27	....	.....	....	1.03	− 1.6	9	5,884	w.	28	n.	26	11	11	8	4.7	
Toledo	628	207	246	29.44	30.12	+ .06	62.2	− 1.9	90	13	71	41	28	54	26	56	52	74	2.61	+ 0.2	7	9,512	sw.	50	s.	22	17	9	4	3.8	
Detroit	730	218	258	29.32	30.12	+ .06	61.4	− 1.7	87	13	70	39	28	53	27	55	51	74	0.75	− 1.7	8	9,127	n.	39	sw.	22	10	11	9	5.2	

TABLE I.—*Climatological data for U. S. Weather Bureau stations, September, 1909*—Continued.

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.								Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.
	Barometer above sea level, feet.	Thermometers above ground.	Anemometer above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. ÷ 2	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.			Total.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.				
Upper Lake Region.							**58.0**	**− 0.9**									**70**	**2.36**	**− 0.9**										**5.4**	
Alpena	609	13	92	29.44	30.10	+ .07	56.2	− 1.1	89	14	66	36	25	46	40	51	48	78	1.86	− 1.6	12	7,545	nw.	34	s.	22	7	11	12	6.1	
Escanaba	612	40	82	29.44	30.11	+ .10	55.0	− 1.9	75	13	64	34	27	46	32	51	48	81	1.48	− 2.1	10	6,345	s.	28	nw.	4	10	6	14	5.6	
Grand Haven	632	54	92	29.42	30.10	+ .05	59.1	− 2.0	83	20	68	35	26	50	27	54	51	80	2.20	− 1.0	11	6,862	nw.	30	s.	14	12	11	7	4.2	
Grand Rapids	707	127	162	29.35	30.12	+ .07	60.6	− 1.2	89	13	70	37	27	51	29	54	50	75	2.11	− 1.0	8	6,598	nw.	32	w.	14	10	9	11	5.6	
Houghton	668	65	74	29.36	30.08	+ .08	56.0	− 0.1	84	13	65	34	27	47	33	.....	.....	.....	2.15	− 1.4	10	4,502	w.	27	w.	22	12	10	8	4.9	
Marquette	734	77	116	29.30	30.10	+ .10	55.8	− 1.0	83	13	64	35	27	47	31	51	47	76	1.69	− 1.8	9	6,991	nw.	36	sw.	7	8	11	11	5.7	
Port Huron	638	70	120	29.41	30.10	+ .04	59.8	− 1.1	88	14	69	35	28	51	35	55	52	78	1.90	− 0.8	10	7,538	sw.	31	ne.	26	9	5	16	6.6	
Sault Sainte Marie	614	40	61	29.42	30.11	+ .09	53.8	− 0.5	80	21	62	35	28	45	31	50	47	84	1.92	− 1.5	11	5,801	nw.	28	nw.	30	6	12	12	6.3	
Chicago	823	140	310	29.23	30.11	+ .07	64.0	− 0.6	89	13	70	47	24	58	20	59	56	78	3.60	+ 0.6	8	8,707	ne.	36	w.	14	10	12	8	4.9	
Milwaukee	681	122	139	29.39	30.13	+ .10	61.6	+ 0.1	86	13	68	43	1	55	22	57	55	82	3.39	+ 0.5	10	7,002	w.	38	sw.	28	15	10	5	3.8	
Green Bay	617	49	86	29.42	30.08	+ .06	59.8	+ 0.7	84	13	69	37	27	51	27	54	50	77	2.68	− 0.4	8	6,322	sw.	32	ne.	29	9	9	12	6.1	
Duluth	1,133	11	47	28.86	30.08	+ .10	54.9	− 1.8	75	21	64	37	24	46	29	59	47	83	3.28	− 0.3	8	8,447	ne.	54	sw.	20	14	6	10	4.5	
North Dakota.							**60.0**	**+ 2.3**									**74**	**1.12**	**− 0.3**										**4.0**	
Moorhead	940	8	57	29.03	30.04	+ .08	60.0	+ 3.4	88	12	73	36	5	47	38	53	50	82	1.44	− 0.9	5	5,466	se.	27	se.	26	16	12	2	3.4	
Bismarck	1,674	8	57	28.26	30.04	+ .10	60.7	+ 3.6	90	27	76	30	24	46	45	51	47	72	0.83	− 0.4	5	7,196	nw.	40	s.	17	14	10	6	4.6	
Devils Lake	1,482	11	44	28.43	29.99	+ .05	58.8	+ 3.2	87	11	72	31	23	46	33	51	46	74	1.15	− 0.2	5	7,645	se.	30	n.	3	13	13	4	3.9	
Williston	1,872	14	56	27.99	29.95	+ .02	60.5	+ 1.0	88	25	75	34	24	46	39	51	45	66	1.07	+ 0.2	10	5,857	se.	42	nw.	17	12	11	7	4.3	
Upper Miss. Valley.							**63.3**	**− 1.0**									**72**	**3.44**	**0.0**										**4.5**	
Minneapolis	918	102	208	.....	.....	.....	61.0	.....	84	10	70	43	24	52	26	.....	.....	.....	2.98	− 0.7	13	7,327	se.	42	s.	21	12	9	9	4.7	
St. Paul	837	171	179	29.16	30.07	+ .08	60.6	+ 0.3	84	10	70	42	1	51	28	54	51	76	4.06	+ 0.6	13	5,996	e.	40	nw.	21	13	9	8	4.8	
La Crosse	714	11	48	29.32	30.03	+ .08	60.6	− 1.1	88	10	71	37	27	51	29	.....	.....	.....	4.03	− 0.1	9	2,491	s.	17	sw.	16	11	7	12	5.5	
Madison	974	70	78	29.07	30.11	+ .08	60.8	+ 0.3	84	13	69	43	26	52	27	55	52	79	2.20	− 1.0	9	5,769	nw.	28	s.	13	11	9	10	4.9	
Charles City	1,015	10	49	29.02	30.10	+ .10	59.8	− 1.9	84	10	70	36	27	49	31	55	53	87	3.12	+ 0.3	9	3,503	se.	26	sw.	12	7	11	12	5.8	
Davenport	606	71	79	29.43	30.09	+ .06	63.6	− 1.1	91	13	73	40	27	54	30	57	54	79	1.50	− 1.6	7	4,098	e.	21	sw.	28	17	4	9	4.0	
Des Moines	861	84	101	29.16	30.07	+ .05	61.8	− 1.2	89	12	74	41	27	54	34	58	55	78	2.06	− 1.0	9	4,247	se.	29	w.	12	10	9	11	5.4	
Dubuque	698	100	115	29.37	30.12	+ .09	62.2	− 1.4	87	13	72	36	27	52	32	56	53	79	4.28	− 0.7	9	3,689	s.	20	n.	23	15	6	9	5.0	
Keokuk	614	64	78	29.43	30.10	+ .07	65.7	− 0.7	94	13	76	42	27	56	29	58	55	77	3.46	− 0.5	9	3,665	se.	20	sw.	28	15	6	9	4.1	
Cairo	356	87	93	29.70	30.08	+ .03	69.6	− 0.6	90	3	78	45	28	61	28	62	58	74	5.66	+ 3.2	11	5,949	ne.	38	n.	9	17	4	9	3.6	
La Salle	536	56	64	29.56	30.13	+ .09	61.5	− 0.4	91	13	74	39	27	53	29	.....	.....	.....	3.15	0.0	7	4,048	ne.	28	sw.	14	16	5	9	4.3	
Peoria	609	11	45	29.45	30.12	+ .08	64.0	− 0.3	92	13	75	35	27	53	31	56	54	80	3.68	+ 0.6	9	3,953	se.	35	w.	14	16	7	7	4.0	
Springfield, Ill	644	10	91	29.40	30.09	+ .04	65.2	− 1.2	90	15	75	39	27	55	28	58	54	75	3.67	+ 0.3	9	5,292	se.	23	s.	14	15	6	9	4.0	
Hannibal	534	75	109	29.52	30.09	+ .06	65.6	− 2.3	92	12	76	36	27	56	33	.....	.....	.....	3.52	0.0	10	4,862	e.	27	w.	14	17	3	10	4.3	
St. Louis	567	208	217	29.47	30.08	+ .04	68.3	− 1.7	92	3	77	43	27	59	29	60	55	70	4.22	+ 1.3	8	6,259	se.	27	w.	9	16	7	7	3.6	
Missouri Valley.							**66.0**	**+ 0.7**									**70**	**3.76**	**+ 1.0**										**4.2**	
Columbia, Mo	784	11	84	29.23	30.05	+ .03	67.0	− 0.8	94	12	78	37	28	56	38	.....	.....	.....	3.09	+ 0.2	10	4,666	se.	21	se.	13	14	9	7	4.0	
Kansas City	963	161	181	29.02	30.05	+ .03	68.8	+ 1.3	95	12	78	46	27	60	26	61	57	73	6.78	+ 3.0	13	7,388	se.	36	se.	12	17	7	6	3.8	
Springfield, Mo	1,324	98	104	28.67	30.05	+ .03	70.6	+ 2.7	96	3	81	42	27	60	32	60	55	66	0.69	− 3.1	9	6,549	se.	31	w.	13	22	3	5	2.7	
Iola	984	11	50	29.03	30.05	+ .04	71.8	+ 3.2	99	11	85	36	28	58	42	.....	.....	.....	1.72	− 1.6	5	3,939	ne.	24	n.	4	15	11	4	3.6	
Topeka	983	85	101	.....	.....	.....	68.8	+ 0.5	97	11	80	43	27	58	34	.....	.....	.....	11.48	+ 7.9	13	5,309	e.	39	n.	21	15	11	4	3.7	
Lincoln	1,189	11	84	28.80	30.05	+ .06	66.2	+ 1.0	96	11	78	41	24	55	39	57	53	73	4.60	+ 2.0	15	5,733	se.	38	sw.	12	10	11	9	4.8	
Omaha	1,105	115	121	28.89	30.06	+ .06	65.6	− 0.2	94	12	75	46	24	56	35	58	55	77	5.25	+ 2.2	11	4,475	se.	35	sw.	12	12	8	10	4.7	
Valentine	2,598	47	54	27.35	30.05	+ .09	61.7	− 0.6	90	28	75	34	19	48	45	52	46	65	3.18	+ 1.4	5	6,670	s.	29	s.	26	17	10	3	3.1	
Sioux City	1,135	96	104	28.86	30.07	+ .09	65.0	− 1.1	87	12	73	39	24	53	33	.....	.....	.....	1.99	− 0.5	10	7,274	se.	41	s.	18	12	10	8	4.8	
Pierre	1,572	70	75	28.37	30.02	+ .07	64.6	+ 1.8	94	11	77	40	24	52	42	53	45	59	1.19	+ 0.1	6	6,717	e.	36	se.	17	11	13	6	4.7	
Huron	1,306	56	67	28.67	30.07	+ .11	61.0	+ 1.4	89	20	74	34	24	48	38	53	49	74	1.38	− 0.3	7	7,394	se.	36	s.	11	15	6	9	4.5	
Yankton	1,233	49	57	28.74	30.05	+ .07	62.6	− 0.7	87	20	74	40	24	52	34	.....	.....	.....	5.67	+ 1.2	10	4,611	e.	39	sw.	12	10	9	11	5.9	
Northern Slope.							**63.5**	**+ 1.0**									**66**	**1.38**	**− 0.3**										**4.7**	
Havre	2,505	11	44	27.34	29.95	+ .01	60.4	+ 2.8	91	28	75	32	4	46	48	51	46	67	0.94	− 0.1	9	5,115	sw.	38	sw.	29	12	15	3	4.4	
Miles City	2,371	26	48	27.49	30.02	.....	63.9	+ 2.7	94	10	78	36	24	50	44	53	48	68	1.11	+ 0.2	7	3,401	sw.	40	nw.	30	12	6	12	4.3	
Helena	4,110	8	56	25.84	30.03	+ .01	56.2	0.0	81	28	67	34	23	46	38	48	43	67	2.14	+ 1.1	9	4,932	sw.	30	w.	17	9	8	13	6.0	
Kalispell	2,962	11	34	26.95	29.99	+ .03	55.4	+ 1.5	83	5	68	30	23	42	41	47	42	68	1.21	− 0.1	8	3,063	w.	25	sw.	29	12	9	9	5.1	
Rapid City	3,234	46	50	26.66	30.04	+ .08	61.6	+ 2.5	88	26	75	36	23	48	42	50	42	58	1.66	+ 0.4	5	4,775	w.	31	sw.	17	16	9	5	3.9	
Cheyenne	6,088	56	64	24.12	30.03	+ .07	57.0	− 0.2	81	2	70	29	23	44	41	46	39	59	1.37	+ 0.4	9	5,813	nw.	41	nw.	21	13	11	6	4.1	
Lander	5,372	26	36	24.73	30.04	+ .09	56.4	+ 1.2	83	28	72	25	23	41	44	46	37	57	0.76	− 0.3	8	2,392	sw.	24	nw.	20	10	16	4	4.6	0.1
Sheridan	3,790	9	47	26.14	30.01	.....	58.2	.....	89	26	73	30	24	44	51	49	42	65	1.68	.....	10	4,239	nw.	39	nw.	17	11	11	8	4.9	
Yellowstone Park	6,200	11	48	23.98	30.05	+ .09	51.4	− 2.0	75	25	63	26	23	40	36	43	37	68	2.45	+ 1.4	12	4,690	sw.	37	sw.	17	8	9	13	6.4	T.
North Platte	2,821	11	51	27.16	30.06	+ .09	64.0	+ 0.8	90	11	78	34	24	50	47	54	49	71	0.77	− 0.7	6	4,826	se.	31	ne.	4	18	5	7	3.4	
Middle Slope.							**63.2**	**+ 0.6**									**64**	**2.07**	**+ 1.0**										**3.2**	
Denver	5,291	129	136	24.83	30.04	+ .08	61.2	− 1.5	88	2	74	34	22	49	36	50	43	59	3.78	+ 2.9	10	4,457	s.	30	e.	21	15	10	5	4.0	
Leadville	10,242	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Pueblo	4,685	80	86	25.38	30.03	+ .07	62.6	− 1.8	92	2	76	36	23	49	39	54	50	72	3.93	+ 3.3	7	4,009	nw.	31	ne.	3	23	3	4	2.6	
Concordia	1,398	42	50	28.59	30.05	+ .07	67.7	− 0.4	96	11	79	40	24	56	40	59	55	74	6.30	+ 3.7	11	4,120	se.	28	s.	12	13	13	4	3.9	
Dodge City	2,509	44	54	27.44	30.01	+ .03	70.2	+ 2.0	100	3	83	45	27	57	38	58	52	62	1.50	− 0.3	6	6,579	se.	40	se.	12	19	9	2	2.8	
Wichita	1,358	98	121	28.64	30.05	+ .05	72.5	+ 2.7	96	3	85	44	27	60	36	60	54	69	1.77	− 1.4	3	6,351	se.	30	n.	21	16	11	3	3.6	
Oklahoma	1,214	10	47	28.76	30.02	+ .03	74.9	+ 2.8	100	11	88	43	27	62	37	60	52	55	0.53	− 2.2	4	8,432	s.	44	n.	22	20	5	5	2.6	
Southern Slope.							**72.7**	**− 0.1**									**60**	**1.70**	**− 1.0**										**2.8**	
Abilene	1,738	45	54	28.23	30.01	+ .05	75.3	+ 1.1	95	21	87	45	28	64	35	61	52	53	1.05	− 2.1	5	4,459	s.	32	w.	19	18	11	1	2.8	
Amarillo	3,676	10	49	26.35	30.02	+ .06	69.3	+ 1.6	95	2	83	45	23	56	40	57	50	62	2.19	− 0.2	4	7,906	s.	34	n.	22	18	11	1	4.0	
Del Rio	944	8	57	29.01	29.98	+ .04	77.9	− 1.0	98	21	90	45	28	65	39	.....	.....	.....	3.16	+ 0.2	2	4,948	se.	31	nw.	22	24	5	1	2.0	
Roswell	3,578	9	57	26.44	30.03	+ .11	68.3	− 2.0	93	21	84	36	28	53	48	56	50	64	0.40	− 1.9	1	3,330	sw.	22	n.	21	20	9	1	2.3	
Southern Plateau.							**69.1**	**− 1.0**									**50**	**1.03**	**0.0**										**2.2**	
El Paso	3,762	110	133	26.22	29.92	+ .04	73.0	+ 0.3	94	2	84	50	29	61	37	56	43	41	0.60	− 0.8	4	7,639	e.	38	w.	21	20	9	1	2.2	
Santa Fe	7,013	8	56	23.39	30.00	+ .07	59.1	− 1.5	81	3	71	35	14	47	32	47	38	54	2.70	+ 1.1	7	5,173	nw.	30	nw.	3	22	6	2	2.5	
Flagstaff	6,907	8	57	23.46	29.95	+ .06	55.6	+ 0.1	76	3	70	32	22	42	42	47	42	67	1.74	− 0.4	8	4,408	sw.	27	sw.	21	18	7	5	3.2	T.
Phoenix	1,108	50	56	28.72	29.85	+ .04	81.0	− 0.4	104	24	94	61	30	68	37	65	55	48	0.42	− 0.6	4	2,783	e.	23	se.	25	20	9	1	2.6	
Yuma	141	9	58	29.69	29.83	+ .05	82.7	− 1.2	105	9	98	52	30	68	44	68	60	55	0.96	+ 0.8	2	3,369	ne.	32	ne.	4	28	2	0	0.8	
Brawley	†105	11	31	29.93	29.82	.....	83.2	.....	105	9	99	56	30	68	42	.....	.....	.....	0.31	.....	1	3,881	se.	28	se.	4	27	3	0	1.3	
Independence	3,910	11	42	25.99	29.93	+ .07	66.2	− 2.9	89	8	82	40	29	51	39	51	35	55	0.07	− 0.2	1	4,660	s.	36	s.	24	19	10	1	2.6	
Middle Plateau.							**60.6**	**− 0.5**									**50**	**1.51**	**+ 0.3**										**3.3**	
Reno	4,532	56	63	25.51	29.96	+ .01	60.8	+ 1.1	88	8	77	33	30	44	47	47	35	46	0.34	+ 0.1	4	3,733	w.	32	sw.	24	20	10	0	2.0	
Tonopah	6,090	12	20	24.14	29.92	.....	62.0	+ 3.9	81	10	72	39	22	52	29	47	31	36	2.07	+ 1.6	4	6,711	se.	35	nw.	21	17	12	1	3.1	
Winnemucca	4,344	18	56	25.66	30.02	+ .09	58.8	− 1.7	90	9	77	26	22	41	50	45	33	48	0.64	+ 0.3	5	3,506	nw.	33	sw.	10	20	4	6	2.8	
Modena	5,479	10	43	24.70	30.01	+ .09	57.6	− 2.6	79	20	72	30	23	43	43	47	36	56	1.21	+ 0.7	5	6,408	w.	37	sw.	24	15	9	6	4.1	
Salt Lake City	4,360	105	110	25.68	30.01	+ .06	63.2	− 1.9	84	3	75	38	22	52	35	50	41	50	1.55	+ 0.7	6	5,210	se.	43	se.	4	12	16	2	3.7	
Durango	6,546	18	56	23.78	30.01	+ .08	57.4	− 0.8	80	3	72	31	23	43	42	47	40	62	3.63	+ 1.8	8	3,722	nw.	22	n.	12	13	13	4	3.5	
Grand Junction	4,608	43	51	25.45	30.01	+ .06	64.6	− 1.8	87	3	77	39	22	52	37	52	42	52	1.13	+ 0.2	6	3,250	e.	24	w.	11	17	10	3	3.7	
Northern Plateau.							**62.4**	**+ 1.2**									**53**	**1.13**	**+ 0.4**										**4.0**	
Baker City	3,471	48	58	26.49	30.05	+ .06	58.0	+ 1.0	86	16	70	31	22	46	38	49	42	61	1.59	+ 0.8	7	4,131	s.	25	n.	20	12	9	9	4.8	
Boise	2,739	78	86	27.20	30.03	+ .06	63.7	+ 1.8	91	9	76	36	22	50	38	51	41	50	0.51	+ 0.1	8	3,867	nw.	32	w.	29	12	12	6	4.5	
Lewiston	737	10	51	29.19	30.00	+ .02	65.5	+ 2.0	93	7	79	41	22	52	40	.....	.....	.....	1.43	+ 0.8	7	3,482	e.	40	w.	17	10	8	12	5.6	
Pocatello	4,477	46	54	25.54	30.03	+ .07	59.4	− 1.3	83	25	72	30	22	47	35	49	42	57	2.47	+ 1.6	10	5,652	se.	36	sw.	28	10	12	8	4.9	
Spokane	1,929	91	110	27.97	30.00	+ .02	61.5	+ 2.7	88	16	74	36	24	49	39	50	49	50	0.18	− 0.8	6	4,655	sw.	28	s.	25	10	10	10	5.1	
Walla Walla	1,000	71	79	28.94	30.01	+ .01	66.1	+ 0.7	93	16	78	41	24	55	40	54	44	49	0.61	− 0.3	7	4,022	s.	28	sw.	20	11	12	7	4.5	
N. Pac. Coast Reg.							**57.9**	**+ 1.0**									**80**	**1.09**	**− 1.4**										**4.0**	
Blaine	58	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
North Head	211	11	56	29.85	30.08	+ .05	55.2	− 1.0	80	4	59	47	26	52	28	53	52	94	1.27	− 0.6	9	10,360	nw.	64	se.	28	10	4	16	6.1	

TABLE I.—*Climatological data for U. S. Weather Bureau stations, September, 1909*—Continued.

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.									Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.			Wind.					Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.
	Barometer above sea level, feet.	Thermometers above ground.	Anemometer above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.				Total.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.					
N.P.Coast Reg.-Con.																														
Port Crescent	259	8	53	29.80	30.08	+ .06	51.4	− 1.1	78	4	60	31	26	43	34	.....	.....	.....	0.68	− 1.6	8	3,252	nw.	16	nw.	16	10	13	7	5.6	
Seattle	123	185	224	29.94	30.07	+ .06	60.1	+ 2.2	84	5	68	47	18	52	31	56	53	80	1.10	− 0.8	7	4,689	n.	32	sw.	16	11	5	14	5.3	
Tacoma	213	113	120	29.82	30.04	+ .02	59.7	+ 2.1	85	4	69	42	18	50	33	54	51	76	0.90	− 1.6	9	3,463	n.	25	w.	16	11	9	10	4.8	
Tatoosh Island	86	7	57	29.96	30.06	+ .05	53.0	0.0	68	23	57	44	26	49	21	51	49	89	2.03	− 4.1	9	8,485	s.	52	e.	23	8	9	13	5.9	
Portland, Oreg.	153	68	106	29.89	30.04	+ .01	63.2	+ 2.6	93	5	74	41	18	53	31	57	53	74	0.95	− 0.9	8	3,939	nw.	24	s.	29	14	9	7	4.3	
Roseburg	510	9	57	29.50	30.04	+ .02	62.6	+ 2.1	95	4	77	38	22	48	51	53	46	64	0.72	− 0.3	6	2,475	nw.	19	sw.	29	18	10	2	2.9	
Mid. Pac. Coast Reg.							**64.9**	**+ 0.5**										**61**	**0.67**	**+ 0.1**									**3.6**	
Eureka	62	62	80	29.97	30.04	+ .03	53.6	− 1.3	74	15	59	44	18	49	23	51	50	90	0.61	− 0.5	5	4,615	n.	43	n.	17	12	4	14	5.3	
Mount Tamalpais	2,375	11	18	27.54	29.98	+ .04	66.2	.....	93	15	73	44	1	59	26	52	41	49	1.16	+ 0.7	5	11,328	nw.	62	sw.	23	22	4	4	2.6	
Point Reyes Light	490	7	18	29.43	29.94	.....	56.2	.....	83	15	61	48	3	52	28	.....	.....	.....	0.84	.....	5	13,339	nw.	68	nw.	20	10	6	14	5.7	
Red Bluff	332	50	56	29.57	29.91	− .02	74.7	+ 0.8	102	14	88	50	30	62	40	57	40	37	0.45	− 0.4	3	4,388	se.	33	nw.	11	23	4	3	1.9	
Sacramento	69	106	117	29.84	29.91	+ .02	69.9	+ 0.8	98	15	83	47	30	57	39	57	47	51	0.21	− 0.2	3	5,830	s.	32	nw.	11	23	5	2	1.6	
San Francisco	155	200	204	29.80	29.97	+ .03	61.6	+ 2.3	93	15	70	50	4	54	37	55	51	79	0.80	+ 0.5	4	5,988	w.	36	sw.	24	15	9	6	4.1	
San José	141	12	110	29.81	29.96	.....	64.8	+ 0.1	95	15	79	43	30	50	46	.....	.....	.....	0.75	+ 0.4	2	3,908	nw.	23	nw.	11	20	8	2	2.4	
Southeast Farallon	30	9	17	29.96	29.99	.....	54.5	.....	71	12	57	47	13	52	19	.....	.....	.....	0.70	+ 0.4	7	9,496	nw.	56	nw.	20	11	6	13	5.6	
S. Pac. Coast Reg.							**66.4**	**+ 1.1**										**63**	**0.02**	**− 0.2**									**2.9**	
Fresno	330	67	70	29.72	29.90	+ .03	74.3	0.0	101	15	91	51	30	58	41	58	45	43	0.00	− 0.3	0	3,506	nw.	16	nw.	11	24	3	3	2.1	
Los Angeles	338	159	191	29.58	29.94	+ .06	68.6	+ 2.1	103	16	79	52	29	58	32	58	52	68	0.04	0.0	1	4,157	sw.	20	sw.	15	14	15	1	3.2	
San Diego	87	94	102	29.84	29.93	+ .04	66.6	− 0.3	100	16	73	53	29	60	31	60	55	74	0.02	0.0	1	4,297	nw.	22	nw.	13	21	8	1	2.4	
San Luis Obispo	201	47	54	29.76	29.97	+ .04	64.3	+ 2.8	102	15	77	43	28	52	47	55	49	68	0.02	− 0.4	1	2,849	nw.	22	nw.	30	15	10	5	3.8	
West Indies.																														
Grand Turk	11	6	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
San Juan	82	48	90	29.84	29.92	− .02	81.0	.....	91	27	87	71	11	75	16	76	73	78	4.11	− 1.0	13	5,919	se.	30	se.	12	6	16	8	5.7	
Panama.																														
Christobal	17	5	60	29.83	29.84	.....	79.1	.....	90	27	85	71	12	73	19	76	75	91	16.33	.....	24	4,367	se.	30	nw.	3	4	15	11	6.0	
Culebra	172	4	30	29.44	29.85	.....	78.6	.....	91	17	86	69	15	71	21	74	73	92	8.40	.....	17	3,584	nw.	28	sw.	1	1	16	13	7.0	
Ancon	92	6	69	29.75	29.84	.....	78.9	.....	93	21	86	70	15	72	20	75	74	92	3.86	.....	16	4,570	nw.	21	s.	26	1	12	17	7.0	
Alhajuela	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7.50	.....	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Bohio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.43	.....	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Gatun	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.86	.....	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	

† Below sea level.

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any 5 minutes, or 0.80 inch in 1 hour, during September, 1909, at all stations furnished with self-registering gages.*

Stations.	Total duration. Date.	From—	To—	Total amount of precipitation.	Excessive rate. Began—	Ended—	Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated. 5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Abilene, Tex	5	2:55 p. m.	3:35 p. m.	0.59	3:07 p. m.	3:25 p. m.	0.03	0.15	0.38	0.51	0.55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Albany, N. Y.	28	.....	.....	1.12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.32	.....	.....	.....
Alpena, Mich.	22	.....	.....	0.81	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.32	.....	.....	.....
Amarillo, Tex.	7	4:10 p. m.	8:00 p. m.	1.48	6:31 p. m.	7:30 p. m.	0.44	0.14	0.18	0.19	0.22	0.46	0.65	0.75	0.78	0.79	0.81	1.02	.....	.....	.....
Anniston, Ala.	22	.....	.....	0.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.43	.....	.....	.....
Asheville, N. C.	16	.....	.....	0.57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.33	.....	.....	.....
Atlanta, Ga.	15	.....	.....	0.36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.36	.....	.....	.....
Atlantic City, N. J.	10	.....	.....	1.51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.38	.....	.....	.....
Augusta, Me.	17	.....	.....	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.45	.....	.....	.....
Baker City, Oreg.	3	1:25 p. m.	3:20 p. m.	0.80	1:57 p. m.	2:16 p. m.	0.05	0.17	0.38	0.50	0.58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Baltimore, Md.	9–10	11:00 p. m.	12:20 p. m.	2.35	3:05 a. m.	3:30 a. m.	0.81	0.05	0.11	0.25	0.42	0.54	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bentonville, Ark.	13	.....	.....	0.72	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.44	.....	.....	.....
Binghamton, N. Y.	23	.....	.....	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.27	.....	.....	.....
Birmingham, Ala.	1	12:15 p. m.	3:10 p. m.	0.94	12:46 p. m.	1:25 p. m.	0.01	0.23	0.46	0.46	0.55	0.59	0.72	0.78	0.89	.....	.....	.....	.....	.....	.....
Bismarck, N. Dak.	2	.....	.....	0.51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.17	.....	.....	.....
Block Island, R. I.	23–24	11:35 p. m.	6:45 a. m.	0.94	3:56 a. m.	4:18 a. m.	0.17	0.22	0.42	0.51	0.63	0.67	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boise, Idaho	7	.....	.....	0.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.07	.....	.....	.....
Boston, Mass.	1	.....	.....	0.52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.40	.....	.....	.....
Buffalo, N. Y.	23	.....	.....	0.51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.99	.....	.....	.....
Burlington, Vt.	23	9:21 p. m.	10:30 p. m.	1.10	9:32 p. m.	10:16 p. m.	0.02	0.06	0.13	0.28	0.51	0.65	0.73	0.83	0.98	1.05	.....	.....	.....	.....	.....
Cairo, Ill.	22	7:50 p. m.	10:00 p. m.	0.81	8:07 p. m.	8:40 p. m.	0.03	0.11	0.17	0.23	0.27	0.45	0.63	0.72	.....	.....	.....	.....	.....	.....	.....
Canton, N. Y.	23	6:15 p. m.	11:15 p. m.	0.62	6:33 p. m.	6:48 p. m.	0.03	0.22	0.37	0.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charles City, Iowa	14	.....	.....	1.64	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.52	.....	.....	.....	.....
Charleston, S. C.	11	12:02 a. m.	D. N.	1.20	12:38 a. m.	1:08 a. m.	0.11	0.10	0.15	0.17	0.25	0.50	0.68	.....	.....	.....	.....	.....	.....	.....	.....
Do	12	7:50 a. m.	10:45 a. m.	1.70	7:56 a. m.	8:56 a. m.	0.01	0.12	0.22	0.40	0.63	0.67	0.87	1.01	1.06	1.24	1.44	1.66	.....	.....	.....
Charlotte, N. C.	17	4:15 p. m.	6:45 p. m.	0.77	4:17 p. m.	4:56 p. m.	0.01	0.07	0.24	0.35	0.45	0.48	0.53	0.59	0.64	.....	.....	.....	.....	.....	.....
Chattanooga, Tenn.	22	11:30 a. m.	3:55 p. m.	3.00	12:23 p. m.	1:33 p. m.	0.04	0.13	0.26	0.28	0.31	0.52	0.84	1.00	1.15	1.53	1.74	2.40	2.83	.....	.....
Cheyenne, Wyom.	3	4:07 p. m.	5:12 p. m.	0.52	4:36 p. m.	4:50 p. m.	0.17	0.12	0.23	0.35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chicago, Ill.	14	5:08 p. m.	8:20 p. m.	1.08	5:14 p. m.	5:35 p. m.	0.01	0.08	0.27	0.38	0.44	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ohio	9	.....	.....	0.98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.35	.....	.....	.....
Cleveland, Ohio	15	2:09 p. m.	2:50 p. m.	0.48	2:09 p. m.	2:22 p. m.	0.00	0.27	0.36	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Columbia, Mo.	6	.....	.....	1.34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.49	.....	.....	.....
Columbia, S. C.	23	.....	.....	0.44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.25	.....	.....	.....
Columbus, Ohio	3–4	10:47 p. m.	D. N.	0.63	11:23 p. m.	11:35 p. m.	0.09	0.26	0.46	0.54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Concord, N. H.	28	.....	.....	0.90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.33	.....	.....	.....
Concordia, Kans.	6	4:55 a. m.	11:43 a. m.	1.87	10:13 a. m.	11:24 a. m.	0.41	0.10	0.28	0.36	0.45	0.54	0.67	0.73	0.79	0.88	1.02	1.12	1.46	.....	.....
Do	9	12:18 a. m.	3:05 a. m.	0.83	12:24 a. m.	12:51 a. m.	0.01	0.08	0.19	0.31	0.52	0.59	0.62	.....	.....	.....	.....	.....	.....	.....	.....
Corpus Christi, Tex.	14	5:34 a. m.	7:13 a. m.	0.59	5:45 a. m.	6:05 a. m.	0.01	0.12	0.26	0.40	0.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	14	.....	.....	0.69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.18	.....	.....	.....
Del Rio, Tex.	14	2:50 a. m.	11:40 a. m.	3.07	5:04 a. m.	5:59 a. m.	0.70	0.11	0.26	0.36	0.48	0.61	0.71	0.80	0.91	1.06	1.16	1.27	.....	.....	.....
Denver, Colo.	4–5	6:52 a. m.	D. N.	1.94	9:38 a. m.	10:21 a. m.	0.18	0.07	0.11	0.15	0.22	0.29	0.41	0.60	0.76	0.81	.....	.....	.....	.....	.....
Des Moines, Iowa	2	.....	.....	0.56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.25	.....	.....	.....
Detroit, Mich.	23	.....	.....	0.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.25	.....	.....	.....
Devils Lake, N. Dak.	12	6:10 p. m.	8:05 p. m.	0.75	6:45 p. m.	7:11 p. m.	0.09	0.07	0.20	0.36	0.47	0.58	0.61	.....	.....	.....	.....	.....	.....	.....	.....
Dodge City, Kans.	12	.....	.....	0.59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.31	.....	.....	.....
Dubuque, Iowa	13–14	7:17 p. m.	D. N.	2.91	7:39 p. m.	8:45 p. m.	0.01	0.05	0.22	0.60	0.75	0.81	0.95	1.19	1.45	1.71	1.87	1.99	2.16	.....	.....
Duluth Minn.	20–21	9:05 p. m.	9:00 a. m.	1.71	9:54 p. m.	11:05 p. m.	0.06	0.07	0.17	0.21	0.28	0.35	0.37	0.39	0.43	0.53	0.56	0.88	1.10	.....	.....
Durango, Colo.	4	.....	.....	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.37	.....	.....	.....
Eastport, Me.	28–29	11:50 p. m.	5:00 a. m.	2.00	3:41 a. m.	4:26 a. m.	0.61	0.09	0.32	0.64	0.82	0.96	1.08	1.16	1.25	1.34	.....	.....	.....	.....	.....
Elkins, W. Va.	10	3:15 a. m.	6:05 a. m.	1.24	4:15 a. m.	4:46 a. m.	0.50	0.05	0.12	0.21	0.42	0.59	0.68	0.71	.....	.....	.....	.....	.....	.....	.....
El Paso, Tex.	11	.....	.....	0.12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.11	.....	.....	.....

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, etc.*—Continued.

Stations.	Date.	Total duration. From—	Total duration. To—	Total amount of precipitation.	Excessive rate. Began—	Excessive rate. Ended—	Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated. 5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Erie, Pa	23	11:55 a. m.	1:45 p. m.	0.75	12:12 p. m.	12:29 p. m.	0.04	0.34	0.40	0.46	0.51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Escanaba, Mich	14			0.68														0.46			
Eureka, Cal	28			0.29														0.11			
Evansville, Ind	9	6:45 p. m.	9:30 p. m.	0.90	6:50 p. m.	7:08 p. m.	0.01	0.14	0.35	0.62	0.73	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flagstaff, Ariz	5			1.04														0.24			
Fort Smith, Ark	5			0.31														0.17			
Fort Worth, Tex	5	9:05 p. m.	11:05 p. m.	1.43	9:20 p. m.	10:09 p. m.	0.08	0.10	0.18	0.36	0.55	0.61	0.72	0.99	1.16	1.23	1.30	.....	.....	.....	.....
Fresno, Cal	‡																				
Galveston, Tex	15	9:06 a. m.	11:40 a. m.	0.92	9:12 a. m.	9:38 a. m.	0.01	0.15	0.33	0.44	0.55	0.64	0.69	.....	.....	.....	.....	.....	.....	.....	.....
Grand Haven, Mich	21			0.71														0.36			
Grand Junction, Colo	5-6			0.52†														*			
Grand Rapids, Mich	14			0.67														0.41			
Green Bay, Wis	13-14	4:30 p. m.	D. N.	0.83	7:55 p. m.	8:13 p. m.	0.02	0.17	0.25	0.54	0.65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hannibal, Mo	14			1.28														0.41			
Harrisburg, Pa	16			1.52														0.59†			
Hartford, Conn	28			0.78														0.38			
Hatteras, N. C	27			1.04														0.20			
Havre, Mont	11			0.23														0.14			
Helena, Mont	10			0.70														0.50			
Houghton, Mich	13			0.30														0.24			
Huron, S. Dak	20			0.30														0.30			
Independence, Cal	27			0.07														0.07			
Indianapolis, Ind	22-23	D. N.	D. N.	0.52	9:12 p. m.	9:23 p. m.	0.01	0.25	0.36	0.39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iola, Kans	6	6:24 p. m.	6:50 p. m.	0.85	6:24 p. m.	6:33 p. m.	0.00	0.50	0.85												
Jacksonville, Fla	13-14	7:40 p. m.	D. N.	1.53	9:41 p. m.	10:39 p. m.	0.11	0.11	0.14	0.20	0.25	0.32	0.36	0.48	0.60	0.69	0.77	0.89	.....	.....	.....
Jupiter, Fla	12	2:16 p. m.	7:40 p. m.	2.24	2:18 p. m.	2:36 p. m.	0.01	0.20	0.52	0.99	1.40	1.65	1.81	1.91	1.95	.....	.....	.....	.....	.....	.....
Kalispell, Mont	29			0.64														0.21			
Kansas City, Mo	13-14	3:19 p. m.	5:45 a. m.	1.32	5:48 p. m.	6:03 p. m.	0.24	0.22	0.40	0.56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	13-14	9:45 p. m.	3:30 a. m.	1.62	10:27 p. m.	11:01 p. m.	0.01	0.16	0.26	0.39	0.52	0.63	.....	.....	.....	.....	.....	.....	.....	.....	.....
Key West, Fla	2	8:36 p. m.	9:50 p. m.	0.64	8:41 p. m.	8:57 p. m.	0.01	0.08	0.34	0.55	0.57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	26	7:30 a. m.	8:42 a. m.	1.08	7:37 a. m.	8:21 a. m.	0.01	0.10	0.26	0.38	0.58	0.70	0.80	0.95	1.01	1.06	.....	.....	.....	.....	.....
Knoxville, Tenn	22	D. N.	6:45 a. m.	1.79	4:20 a. m.	5:14 a. m.	0.53	0.16	0.37	0.52	0.56	0.59	0.67	0.74	0.92	1.03	1.06	1.16	.....	.....	.....
La Crosse, Wis	12	8:26 a. m.	10:17 a. m.	0.62	8:27 a. m.	8:56 a. m.	T.	0.15	0.34	0.38	0.43	0.50	0.56	.....	.....	.....	.....	.....	.....	.....	.....
Lander, Wyo	5			0.28														0.11			
La Salle, Ill	14	7:47 p. m.	D. N.	1.35	3:12 p. m.	3:32 p. m.	0.02	0.15	0.29	0.53	0.59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lewiston, Idaho	29			0.60														0.34			
Lexington, Ky	9-10	8:26 p. m.	12:30 a. m.	2.14	8:28 p. m.	8:43 p. m.	0.01	0.34	0.44	0.56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
					9:08 p. m.	10:22 p. m.	0.62	0.05	0.18	0.30	0.46	0.60	0.62	0.63	0.63	0.66	0.70	0.85	1.15	.....	.....
Do	15	3:05 p. m.	5:30 p. m.	1.35	3:16 p. m.	4:01 p. m.	0.01	0.07	0.19	0.36	0.51	0.62	0.62	0.62	0.91	1.00	.....	.....	.....	.....	.....
Lincoln, Nebr	2			0.95														0.63			
Little Rock, Ark	4-5	6:53 p. m.	D. N.	0.63	7:13 p. m.	7:27 p. m.	0.01	0.15	0.27	0.38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles, Cal	24			0.04														0.02			
Louisville, Ky	9	8:15 p. m.	D. N.	1.52	8:37 p. m.	8:58 p. m.	0.09	0.26	0.54	0.67	0.78	0.84	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynchburg, Va	16			0.95														0.47			
Macon, Ga	16	4:04 p. m.	D. N.	1.56	6:31 p. m.	7:00 p. m.	0.26	0.18	0.51	0.91	1.09	1.13	1.19	.....	.....	.....	.....	.....	.....	.....	.....
Madison, Wis	14			0.33														0.31			
Marquette, Mich	14			1.25														0.33			
Memphis, Tenn	4-5	3:33 p. m.	D. N.	1.38	4:00 p. m.	4:29 p. m.	0.04	0.11	0.16	0.34	0.51	0.61	0.72	.....	.....	.....	.....	.....	.....	.....	.....
Do	20-21	7:45 p. m.	4:30 p. m.	2.37	7:53 p. m.	8:22 p. m.	1.54	0.05	0.16	0.27	0.35	0.44	0.50	.....	.....	.....	.....	.....	.....	.....	.....
Meridian, Miss	8	4:10 p. m.	5:50 p. m.	1.36	4:13 p. m.	4:49 p. m.	0.01	0.29	0.59	0.76	1.03	1.18	1.24	1.31	1.33	.....	.....	.....	.....	.....	.....
Do	14	11:21 a. m.	1:47 p. m.	1.78	12:11 p. m.	12:43 p. m.	0.22	0.22	0.38	0.56	0.70	0.85	1.10	1.14	.....	.....	.....	.....	.....	.....	.....
Milwaukee, Wis	21			1.30														0.60			
Minneapolis, Minn	21-22	2:42 p. m.	D. N.	0.98	4:00 p. m.	4:10 p. m.	0.15	0.21	0.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mobile, Ala	16	3:17 p. m.	5:55 p. m.	1.77	3:28 p. m.	4:25 p. m.	0.02	0.20	0.47	0.73	0.91	1.01	1.17	1.33	1.44	1.50	1.57	1.67	.....	.....	.....
Modena, Utah	6			0.13														0.13			
Montgomery, Ala	21			0.39														0.39			
Moorhead, Minn	20			0.30														0.28			
Mount Tamalpais, Cal	25			0.81														0.12			
Mount Weather, Va	23			0.49														0.40			
Nantucket, Mass	24			1.43														0.57			
Nashville, Tenn	9-10	11:00 p. m.	4:00 a. m.	1.32	12:02 a. m.	12:17 a. m.	0.19	0.40	0.68	0.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Haven, Conn	5			0.50														0.45			
New Orleans, La	13	6:15 a. m.	7:08 a. m.	1.38	6:20 a. m.	6:51 a. m.	0.01	0.37	0.76	0.84	1.03	1.20	1.31	1.32	.....	.....	.....	.....	.....	.....	.....
Do	14	2:56 p. m.	4:00 p. m.	0.74	3:12 p. m.	3:46 p. m.	0.05	0.08	0.20	0.30	0.45	0.50	0.56	0.64	.....	.....	.....	.....	.....	.....	.....
Do	19-20	4:45 p. m.	11:25 p. m.	4.51	11:48 a. m.	12:26 p. m.	2.09	0.07	0.10	0.18	0.46	0.67	0.78	0.96	1.04	.....	.....	.....	.....	.....	.....
New York, N. Y	24			0.55														0.20			
Norfolk, Va	10			0.21														0.10			
Northfield, Vt	1			0.38														0.27			
North Head, Wash	20			0.37														0.13			
North Platte, Nebr	4			0.40														0.40			
Oklahoma, Okla	4			0.36														0.15			
Omaha, Nebr	12-13	7:08 p. m.	D. N.	1.43	7:13 p. m.	7:25 p. m.	0.01	0.32	0.56	0.61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oswego, N. Y	23			0.65														0.37			
Palestine, Tex	15	8:52 p. m.	11:00 p. m.	1.06	9:10 p. m.	9:40 p. m.	0.10	0.19	0.48	0.68	0.78	0.86	0.92	.....	.....	.....	.....	.....	.....	.....	.....
Parkersburg, W. Va	15	5:05 p. m.	5:27 p. m.	0.56	5:12 p. m.	5:19 p. m.	0.01	0.45	0.54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla	1	4:30 p. m.	5:20 p. m.	0.57	4:47 p. m.	4:59 p. m.	0.01	0.14	0.34	0.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Peoria, Ill	21			1.19														0.60			
Philadelphia, Pa	10			1.59														0.41			
Phoenix, Ariz	4			0.20														0.08			
Pierre, S. Dak	3-4			0.41														0.08			
Pittsburg, Pa	23			0.34														0.21			
Pocatello, Idaho	2			0.33														0.21			
Point Reyes Light, Cal	28			0.27														0.10			
Port Huron, Mich	25			0.89														0.42			
Portland, Me	24			0.70														0.42			
Portland, Oreg	28			0.38														0.19			
Providence, R. I	23-24			0.88														0.35			
Pueblo, Colo	7	7:55 p. m.	9:45 p. m.	0.63	8:09 p. m.	8:32 p. m.	0.04	0.16	0.29	0.37	0.45	0.49	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raleigh, N. C	10	6:00 p. m.	7:05 p. m.	0.82	6:36 p. m.	7:04 p. m.	0.06	0.22	0.29	0.35	0.50	0.68	0.76	.....	.....	.....	.....	.....	.....	.....	.....
Do	18	3:20 p. m.	4:10 p. m.	0.71	3:22 p. m.	3:48 p. m.	0.01	0.11	0.24	0.39	0.55	0.63	0.67	.....	.....	.....	.....	.....	.....	.....	.....
Rapid City, S. Dak	1			1.06														0.48			
Red Bluff, Cal	26			0.08														0.05			
Reno, Nev	6			0.20														0.11			
Richmond, Va	9-10	4:25 p. m.	2:30 a. m.	1.29	1:00 a. m.	1:32 a. m.	0.64	0.09	0.20	0.31	0.39	0.49	0.58	0.65	.....	.....	.....	.....	.....	.....	.....
Do	10	8:35 a. m.	10:30 a. m.	0.66	8:35 a. m.	9:05 a. m.	0.00	0.18	0.40	0.41	0.44	0.51	0.55	.....	.....	.....	.....	.....	.....	.....	.....
Rochester, N. Y	23	2:25 p. m.	8:05 p. m.	0.75	2:59 p. m.	3:14 p. m.	0.02	0.17	0.32	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Roseburg, Oreg	29			0.25			0.04	0.26	0.33	.....	.....	.....	.....	.....	.....	.....	.....	0.12	.....	.....	.....
Roswell, N. Mex	12	3:50 p. m.	5:45 p. m.	0.40	4:17 p. m.	4:23 p. m.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento, Cal	28			0.12														0.06			
St. Louis, Mo	9	3:47 p. m	4:50 p. m.	0.69	4:00 p. m.	4:16 p. m.	0.01	0.14	0.29	0.51	0.53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Paul, Minn	21-22	4:10 p. m.	12:45 a. m.	1.24	4:12 p. m.	4:40 p. m.	0.01	0.18	0.36	0.49	0.57	0.66	0.71	.....	.....	.....	.....	.....	.....	.....	.....
Salt Lake City, Utah	11			0.39														0.14			
San Antonio, Tex	16			0.37														0.31			

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, etc.*—Continued.

Stations.	Date.	Total duration. From—	Total duration. To—	Total amount of precipitation.	Excessive rate. Began—	Excessive rate. Ended—	Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated. 5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
San Diego, Cal.	1			0.02														0.01			
Sand Key, Fla.	3	6:25 a. m.	7:10 a. m.	0.61	6:53 a. m.	7:03 a. m.	0.09	0.29	0.52												
Do.	27-28	8:51 p. m.	7:50 a. m.	1.93	1:49 a. m.	2:19 a. m.	0.32	0.10	0.13	0.44	0.89	1.24	1.40								
Sandusky, Ohio	23			0.57														0.24			
San Francisco, Cal.	25			0.57														0.09			
San Jose, Cal.	25			0.69														0.11			
San Luis Obispo, Cal.	24			0.02														0.01			
Santa Fe, N. Mex.	3	1:07 p. m.	2:55 p. m.	1.21	1:33 p. m.	2:12 p. m.	0.03	0.16	0.33	0.55	0.71	0.79	0.92	1.02	1.10						
Sault Sainte Marie, Mich	22			1.11														0.51			
Savannah, Ga.	13	8:45 a. m.	2:55 p. m.	1.18	1:07 p. m.	1:47 p. m.	0.09	0.18	0.38	0.58	0.64	0.69	0.77	0.82	0.87						
Do.	17	9:47 a. m.	10:22 a. m.	0.69	9:53 a. m.	10:13 a. m.	0.01	0.19	0.44	0.58	0.66										
Do.	18	9:47 p. m.	10:11 p. m.	1.05	10:13 p. m.	10:38 p. m.	0.03	0.18	0.52	0.78	0.92	1.00									
Scranton, Pa.	23			0.45														0.22			
Seattle, Wash.	16			0.41														0.17			
Sheridan, Wyo	3			0.57														0.16			
Shreveport, La.	22			0.34														0.33			
Sioux City, Iowa	18			0.27														0.22			
Southeast Farallon, Cal.	25			0.30														0.09			
Spokane, Wash.	19			0.05														0.04			
Springfield, Ill.	14	4:03 p. m.	9:50 p. m.	1.51	4:29 p. m.	5:30 p. m.	0.01	0.17	0.27	0.31	0.31	0.31	0.31	0.31	0.48	0.72	0.84	1.11	1.19		
Springfield, Mo.	4			0.20														0.19			
Syracuse, N. Y.	23			0.53														0.29			
Tacoma, Wash.	28			0.14														0.12			
Tampa, Fla.	3	3:58 p. m.	4:44 p. m.	0.78	4:00 p. m.	4:25 p. m.	0.01	0.22	0.40	0.53	0.71	0.76									
Tatoosh Island, Wash.	9			0.41														0.20			
Taylor, Tex.	20			0.18														0.18			
Thomasville, Ga.	11	8:02 p. m.	8:25 p. m.	0.58	8:07 p. m.	8:20 p. m.	0.01	0.27	0.50	0.57											
Do.	17	1:40 p. m.	7:03 p. m.	3.13	1:44 p. m.	2:49 p. m.	0.02	0.16	0.20	0.27	0.47	0.83	1.35	1.93	2.37	2.61	2.75	2.86	2.99		
Toledo, Ohio	20	5:09 p. m.	7:00 p. m.	1.63	5:11 p. m.	5:25 p. m.	0.01	0.20	0.47	0.57											
					6:30 p. m.	6:42 p. m.	0.95	0.30	0.59	0.68											
Tonopah, Nev.	28			0.59														0.31			
Topeka, Kans.	6-7	8:46 p. m.	12:10 a. m.	3.92	8:49 p. m.	10:24 p. m.	0.01	0.09	0.36	0.62	0.73	0.92	1.10	1.36	1.48	1.67	1.85	2.14	2.71	3.20	
					3:16 a. m.	4:15 a. m.		0.07	0.14	0.25	0.29	0.32	0.46	0.60	0.65	0.78	0.89	1.17			
					5:52 a. m.	6:42 a. m.	0.06	0.68	0.73	0.83	0.91	1.01	1.14	1.30	1.46	1.60	1.67				
Do.	7	2:50 a. m.	1:40 p. m.	3.80	6:42 a. m.	7:15 a. m.		1.74	1.82	1.93	2.00	2.10	2.17	2.23							
Valentine, Nebr.	1	4:56 a. m.	8:29 a. m.	2.03	5:04 a. m.	6:00 a. m.	0.03	0.08	0.27	0.43	0.54	0.63	0.73	0.83	0.93	1.11	1.23	1.36			
Vicksburg, Miss.	13	12:58 p. m.	2:10 p. m.	0.63	1:35 p. m.	1:58 p. m.	0.07	0.13	0.29	0.35	0.51	0.56									
Do.	20-21	11:20 a. m.	10:15 a. m.	3.71	12:01 a. m.	1.42 a. m.	1.65	0.05	0.10	0.15	0.20	0.26	0.31	0.36	0.44	0.54	0.64	0.89	1.51	1.91	1.97
Walla Walla, Wash.	11			0.15														0.10			
Washington, D. C.	23			1.31														0.70			
Wichita, Kans.	7			1.08														0.53			
Williston, N. Dak.	3			0.46														*			
Wilmington, N. C.	1			0.33														0.30			
Winnemucca, Nev.	27			0.23														0.18			
Wytheville, Va.	15-16			1.19														0.40			
Yankton, S. Dak.	11-12	5:15 p. m.	3:45 a. m.	1.43	9:21 p. m.	9:30 p. m.	0.72	0.23	0.56												
Yellowstone Park, Wyo	1-2			0.87														*			

* Self register not working. † Estimated. ‡ No precipitation recorded during month.

TABLE III.—*Data furnished by the Canadian Meteorological Service, September, 1909.*

Stations	Pressure. Actual, reduced to mean of 24 hours.	Pressure. Sea level, reduced to mean of 24 hours.	Pressure. Departure from normal.	Temperature. Mean.	Temperature. Departure from normal.	Temperature. Mean maximum.	Temperature. Mean minimum.	Precipitation. Total.	Precipitation. Departure from normal.	Precipitation. Total snowfall.
	Ins.	*Ins.*	*Ins.*	°	°	°	°	*Ins.*	*Ins.*	*Ins.*
St. Johns, N. F.										
Sydney, C. B. I.	30.12	30.16	+.15	58.6	+ 2.1	68.2	49.0	3.07	−0.21	
Halifax, N. S.	30.05	30.15	+.11	60.4	+ 2.8	69.1	51.7	5.93	+2.22	
Grand Manan, N. B.	30.06	30.11	+.08	57.0	+ 0.9	63.1	50.9	9.23	+6.06	
Yarmouth, N. S.	30.05	30.13	+.08	58.9	+ 2.8	67.1	50.7	4.15	+0.70	
Charlottetown, P. E. I.	30.09	30.13	+.12	60.2	+ 2.9	67.1	53.2	3.84	+0.44	
Chatham, N. B.	30.06	30.08	+.08	58.0	+ 2.6	67.3	47.8	8.28	+5.57	
Father Point, Que.	30.03	30.05	+.07	50.8	+ 0.4	58.6	42.9	5.44	+2.31	
Quebec, Que.	29.74	30.06	+.05	55.4	+ 0.3	63.4	47.3	6.40	+2.73	
Montreal, Que.	29.86	30.06	+.02	58.2	− 0.2	65.4	51.0	4.96	+1.66	
Rockliffe, Ont.	29.46	30.06	+.03	55.1	− 0.6	66.4	43.8	1.79	−1.49	
Ottawa, Ont.	29.82	30.14	+.10	56.8	− 0.6	65.9	47.8	3.06	+0.37	
Kingston, Ont.	29.79	30.10	+.06	59.2	− 0.8	66.5	51.9	3.92	+1.12	
Toronto, Ont.	29.72	30.09	+.03	60.3	+ 1.3	70.2	50.4	1.91	−1.34	
White River, Ont.	28.74	30.06	+.08	48.5	− 1.8	58.7	38.3	2.02	−0.75	
Port Stanley, Ont.	29.46	30.10	+.04	58.0	− 1.5	67.0	48.9	1.05	−1.68	
Southampton, Ont.	29.42			58.7	+ 1.2	66.9	50.5	2.04	−0.90	

Stations.	Pressure. Actual, reduced to mean of 24 hours.	Pressure. Sea level, reduced to mean of 24 hours.	Pressure. Departure from normal.	Temperature. Mean.	Temperature. Departure from normal.	Temperature. Mean maximum.	Temperature. Mean minimum.	Precipitation. Total.	Precipitation. Departure from normal.	Precipitation. Total snowfall.
	Ins.	*Ins.*	*Ins.*	°	°	°	°	*Ins.*	*Ins.*	*Ins.*
Parry Sound, Ont.	29.40	30.08	+.05	56.1	+ 0.1	66.3	45.9	4.90	+1.23	
Port Arthur, Ont.	29.35	30.07	+.09	52.6	+ 0.4	62.3	43.0	2.61	−0.87	
Winnipeg, Man.	29.15	29.98	+.04	58.0	+ 5.5	70.9	45.1	0.60	−1.43	
Minnedosa, Man.	28.17	29.97	+.03	57.1	+ 6.6	71.8	42.4	1.13	−0.23	
Qu' Appelle, Assin.	27.68	29.91	−.01	57.2	+ 6.1	70.5	44.0	0.08	−1.25	
Medicine Hat, Alberta.	27.67	29.91	−.01	63.0	+ 8.0	77.9	48.2	0.42	−0.76	
Swift Current, Sask.	27.40	29.95	+.03	57.7	+ 4.6	71.1	44.3	0.70	−0.52	
Calgary, Alberta.	26.40	29.89	−.03	55.2	+ 5.4	70.0	40.5	0.36	−1.00	
Banff, Alberta.	25.41	29.96	−.03	50.9	+ 5.1	65.3	36.5	1.18	−0.49	T.
Edmonton, Alberta.	27.61	29.88	−.02	55.4	+ 6.1	72.5	38.4	0.06	−1.27	
Prince Albert, Sask.	28.32	29.86	−.04	55.7	+ 7.3	69.5	41.9	1.37	+0.09	
Battleford, Sask.	28.16	29.88	−.02	58.1	+ 6.3	73.7	42.5	0.58	−0.67	
Kamloops, B. C.	28.64	29.89	−.08	62.0	+ 4.6	74.5	49.6	1.21	+0.36	
Victoria, B. C.	29.94	30.03	+.02	57.0	+ 2.2	65.8	48.3	0.79	−1.37	
Barkerville, B. C.	25.68	29.98	.00	45.2	− 1.5	52.4	37.9	4.93	+2.02	
Dawson, Yukon	28.62			39.7		47.1	32.4	2.40		10.0
Hamilton, Bermuda	29.91	30.07	.00	76.3	− 1.1	81.0	71.6	15.70	+9.19	

Climatological Districts of the United States.

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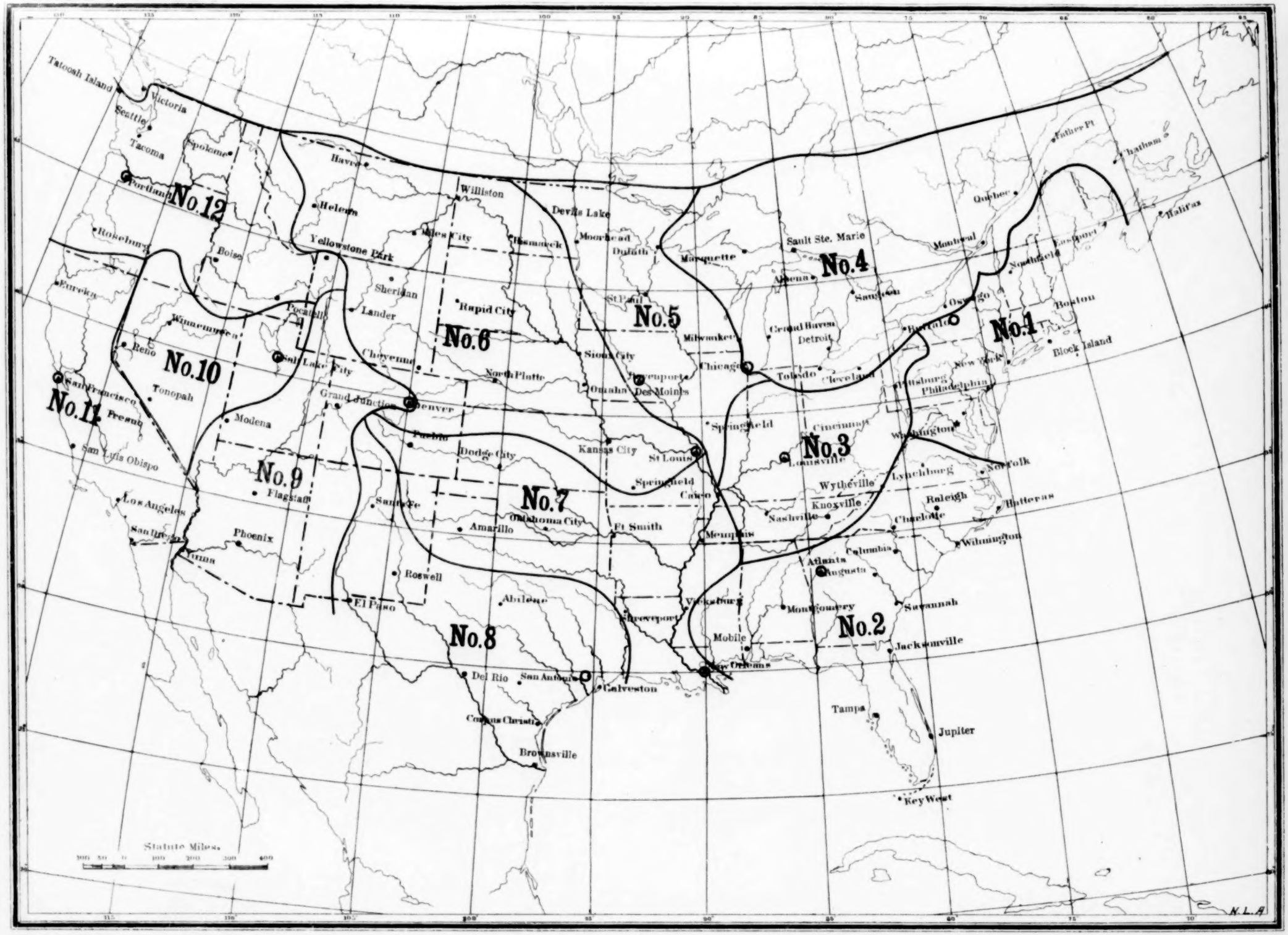
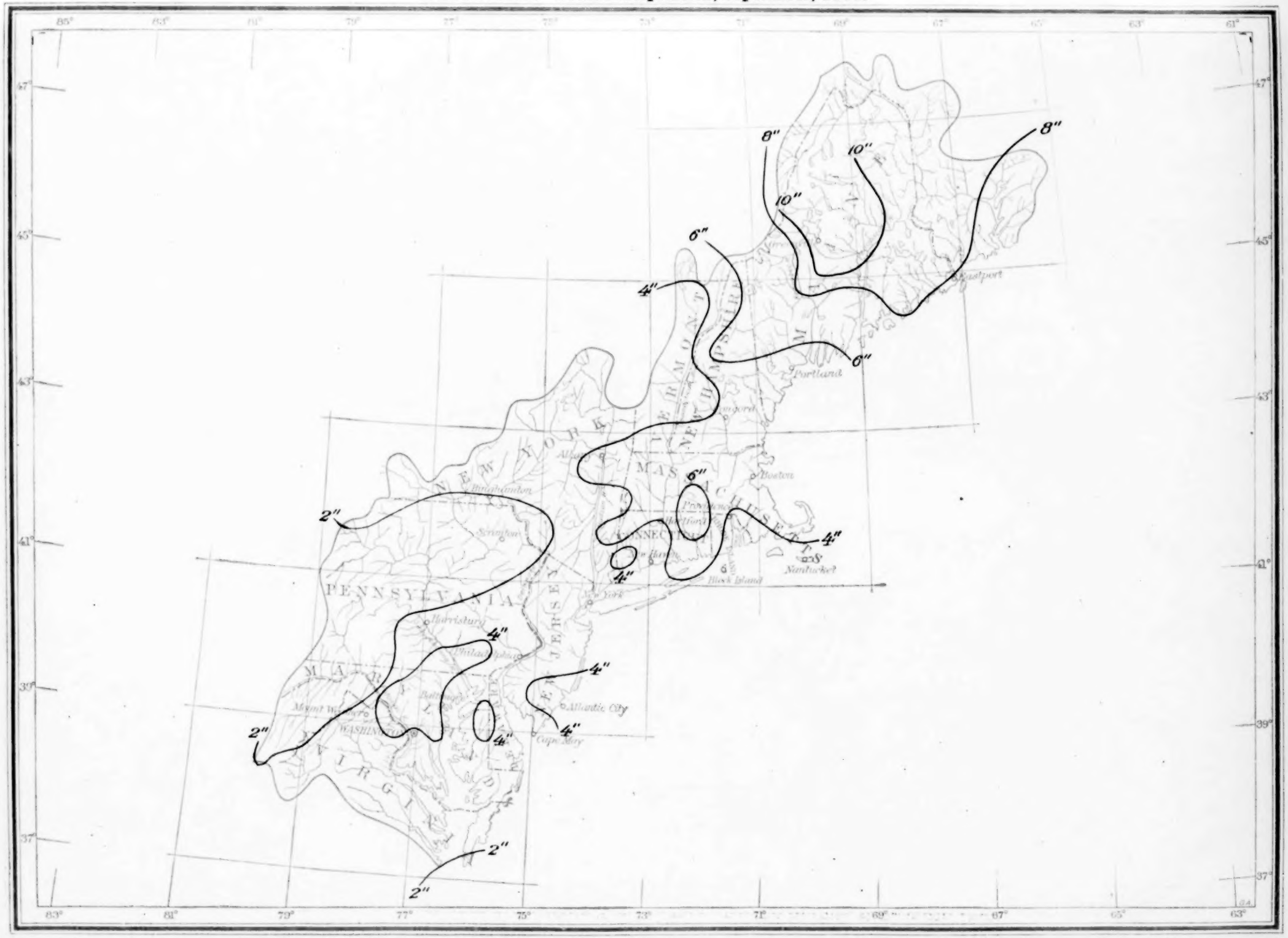
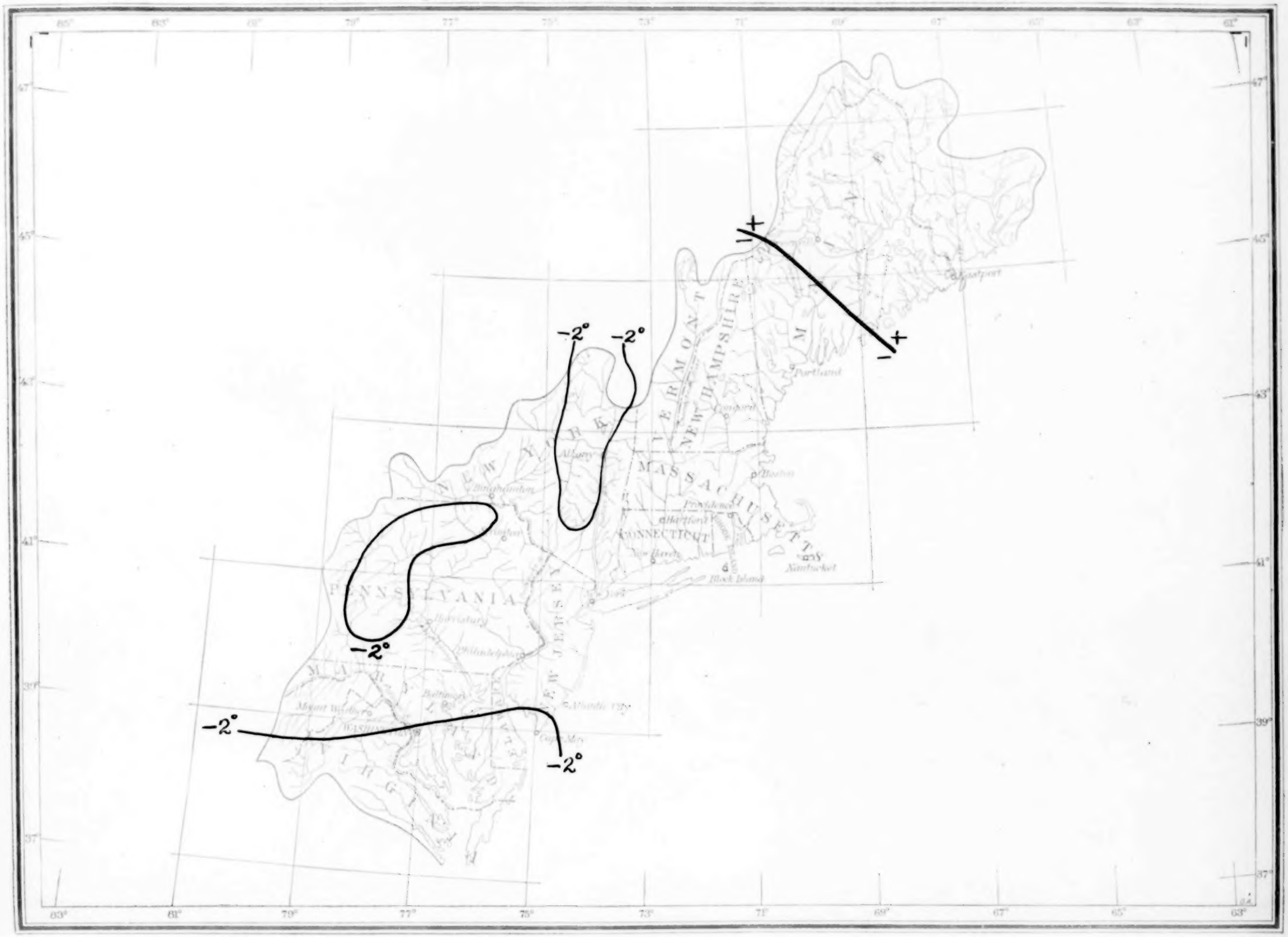


District No. 1.—Total Precipitation, September, 1909.

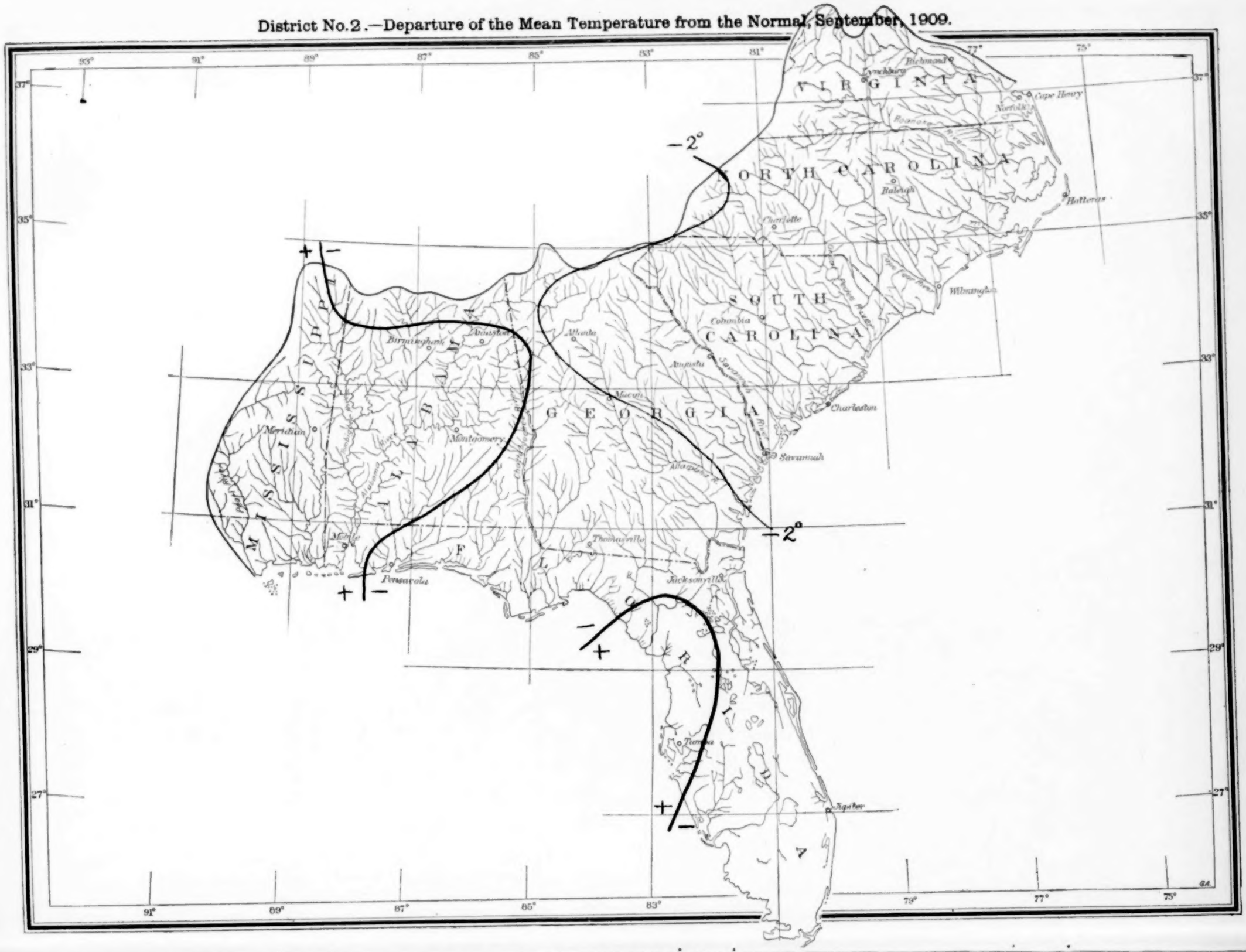


Distriot No. 1.—Departure of the Mean Temperature from the Normal, September, 1909.



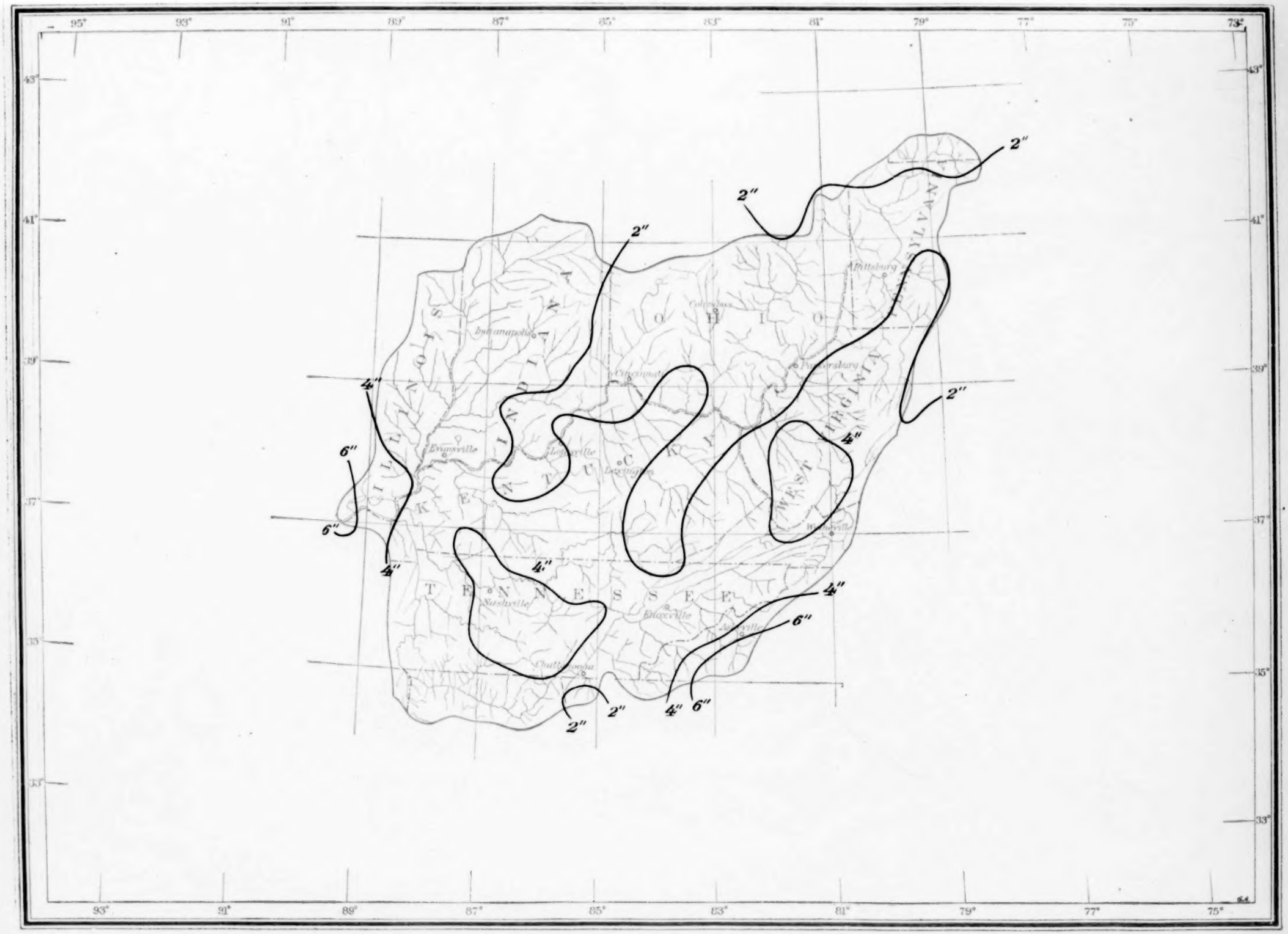
District No. 2.—Total Precipitation, September, 1909.

District No. 2.—Departure of the Mean Temperature from the Normal, September, 1909.

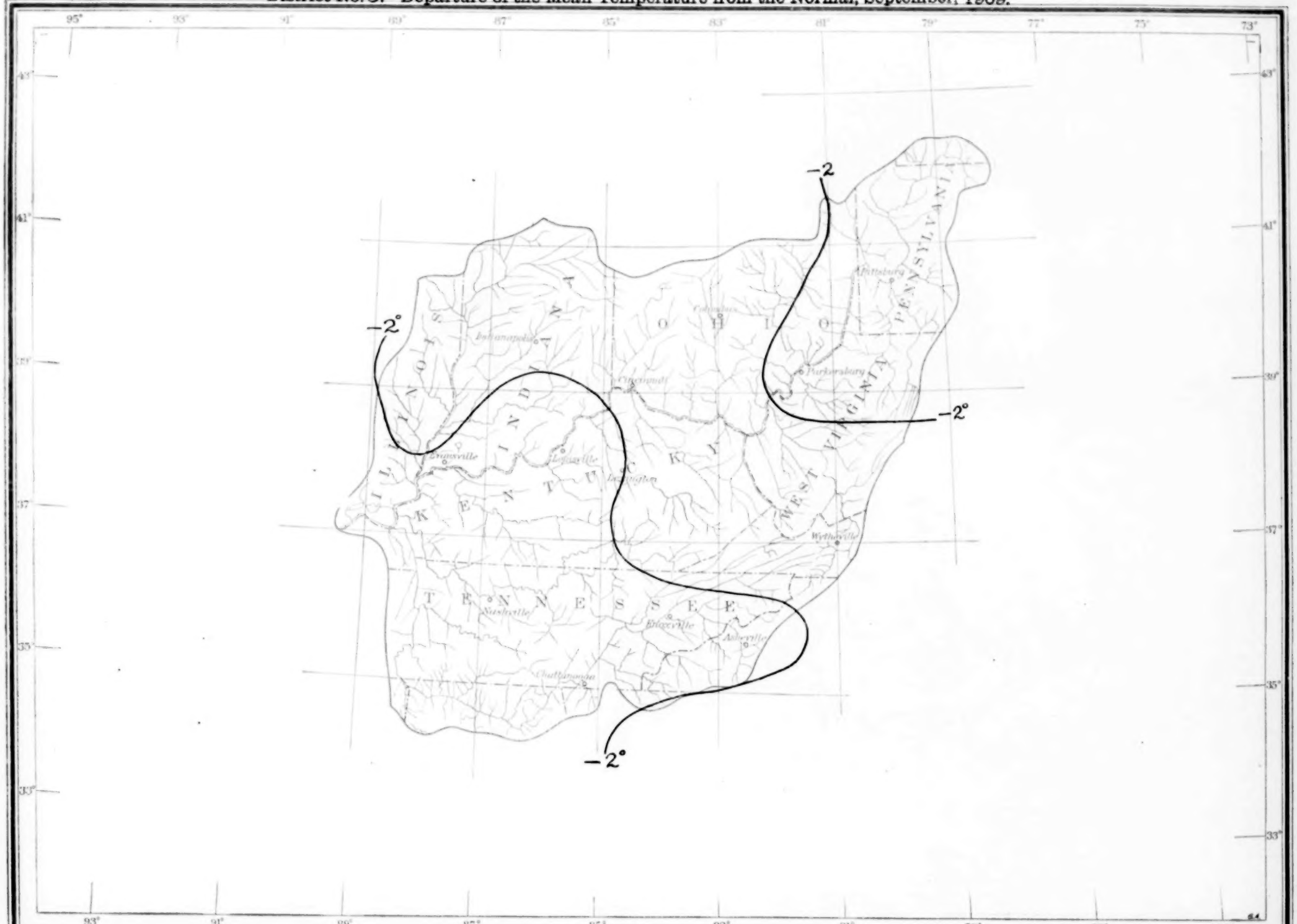


District No. 3.—Total Precipitation, September, 1909.

District No. 3.—Total Precipitation, September, 1909.

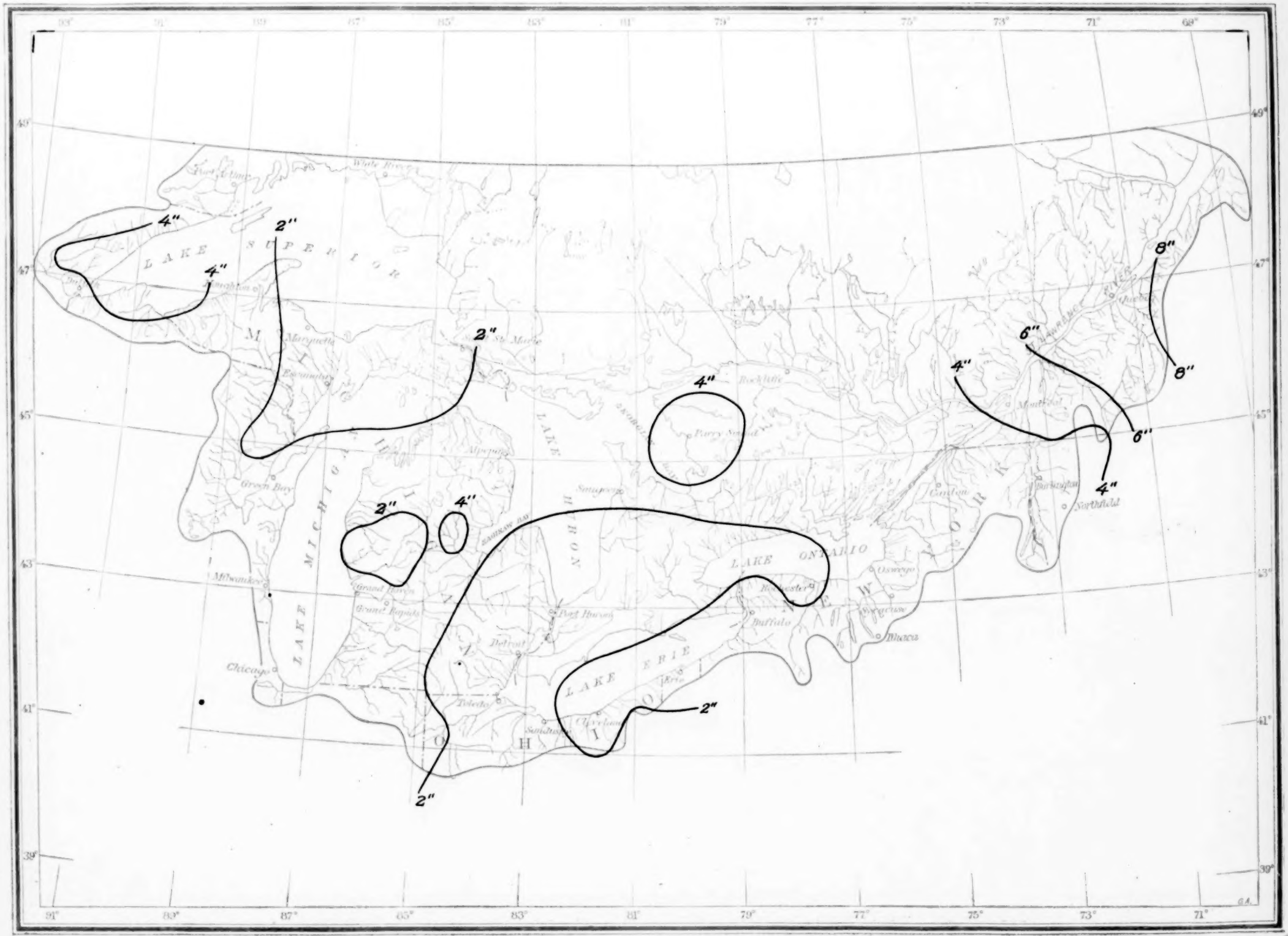


District No. 3.—Departure of the Mean Temperature from the Normal, September, 1909.

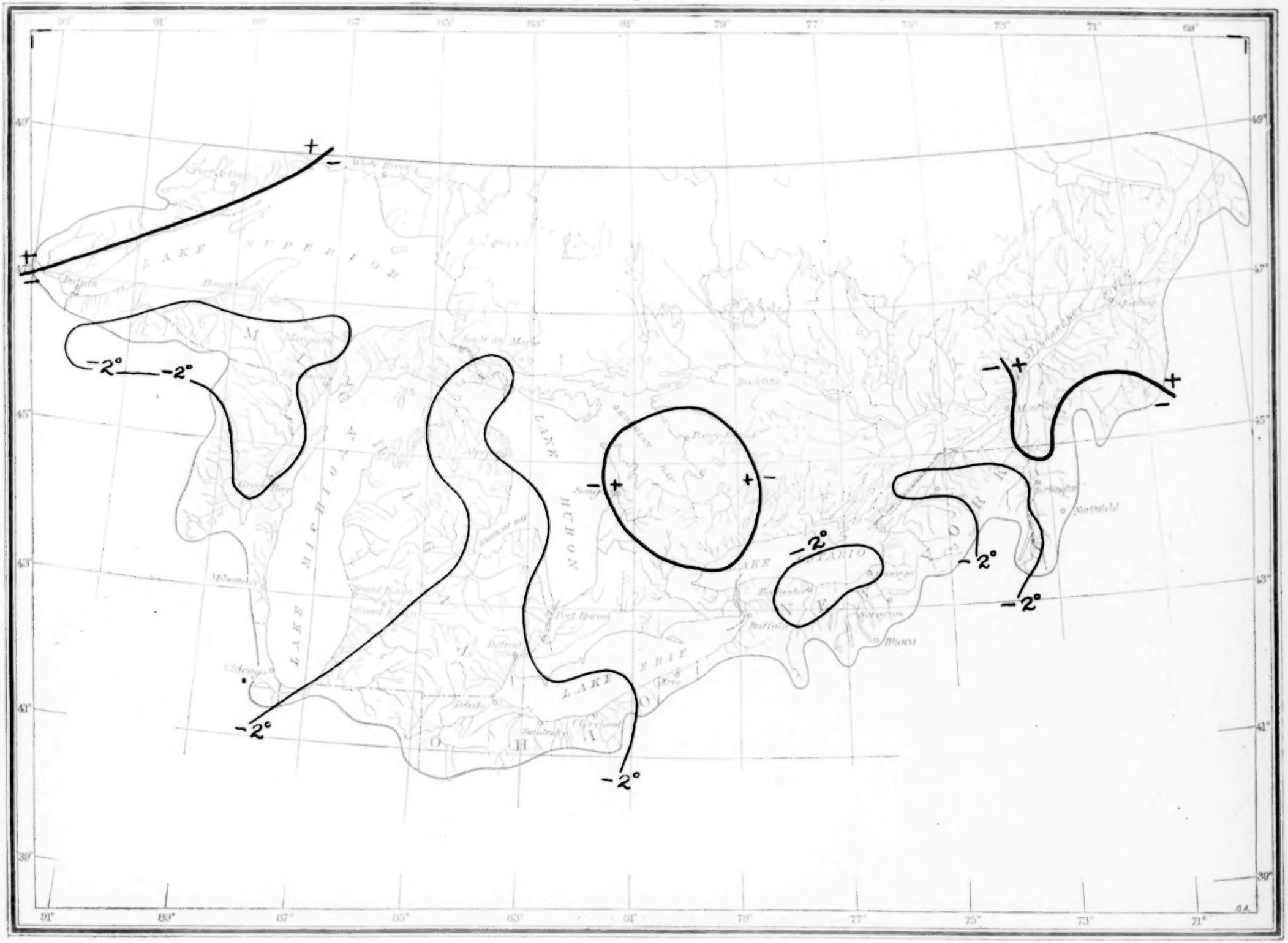


District No. 4.—Total Precipitation, September, 1909.

District No. 4.—Total Precipitation, September, 1909.



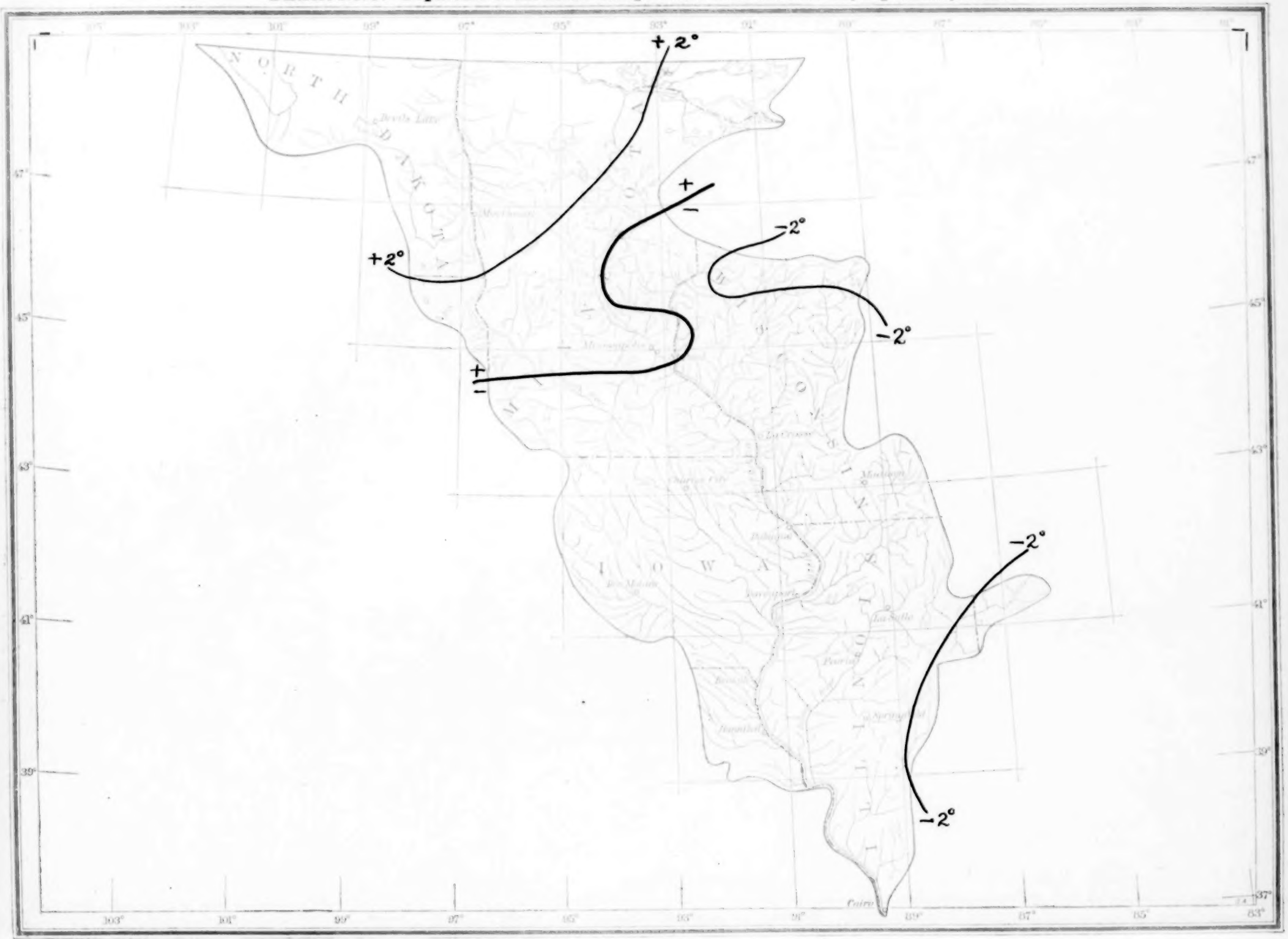
District No. 4.—Departure of the Mean Temperature from the Normal, September, 1909.



District No. 5.—Total Precipitation, September, 1909.

District No. 5.—Total Precipitation, September, 1909.

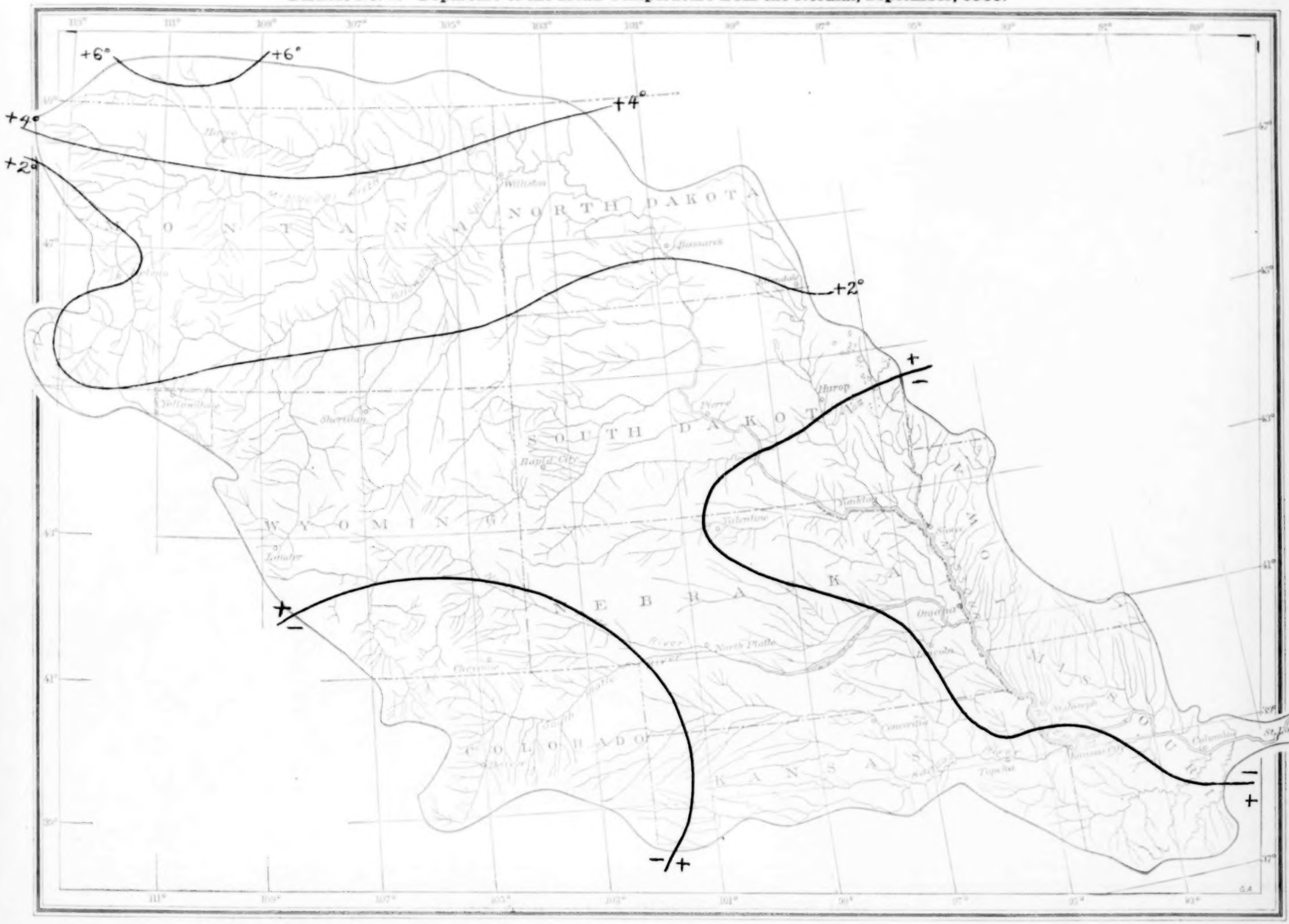
District No. 5.—Departure of the Mean Temperature from the Normal, September, 1909.



District No. 6.—Total Precipitation, September, 1909.

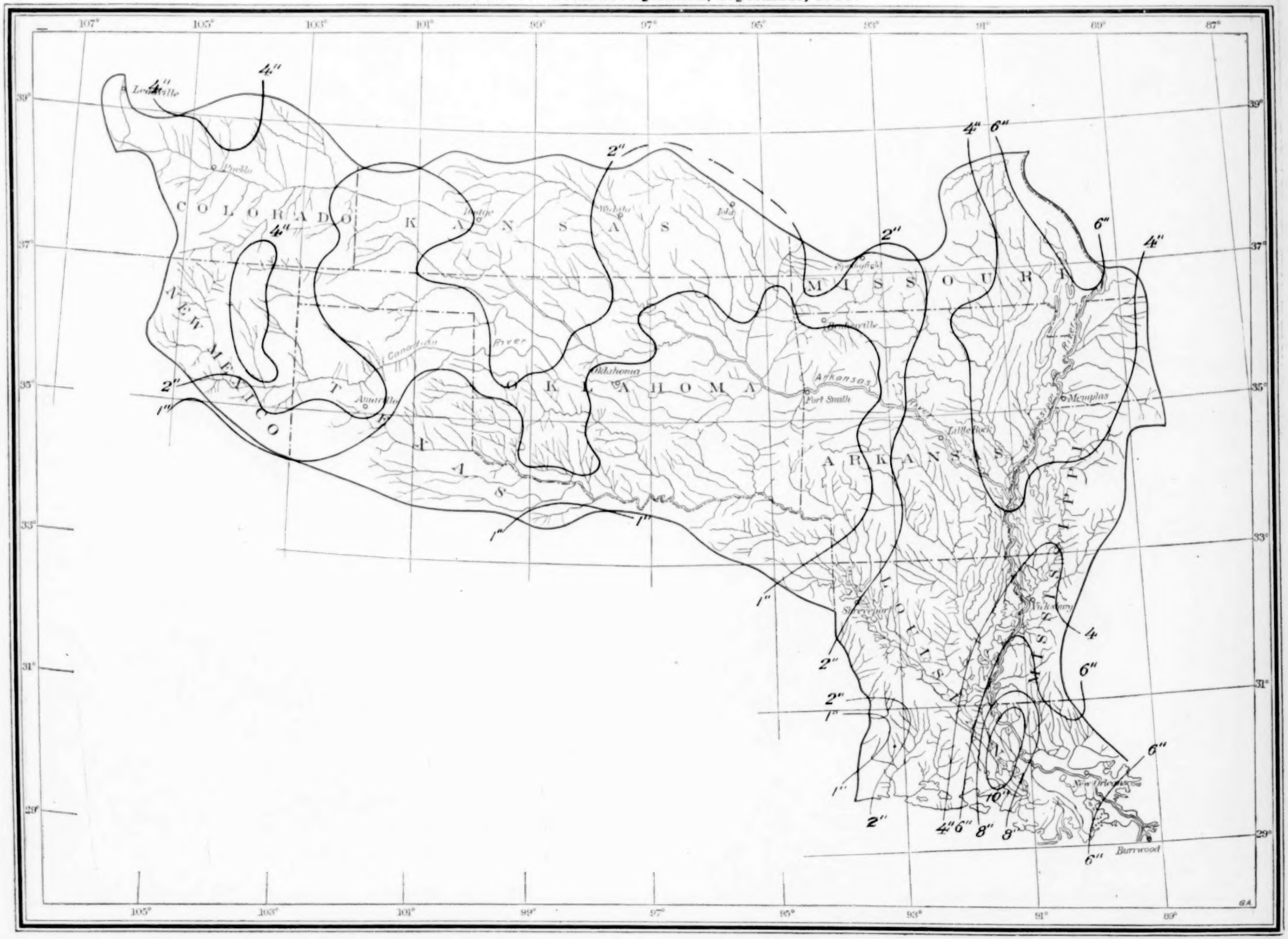
District No. 6.—Total Precipitation, September, 1909.

District No. 6.—Departure of the Mean Temperature from the Normal, September, 1909.

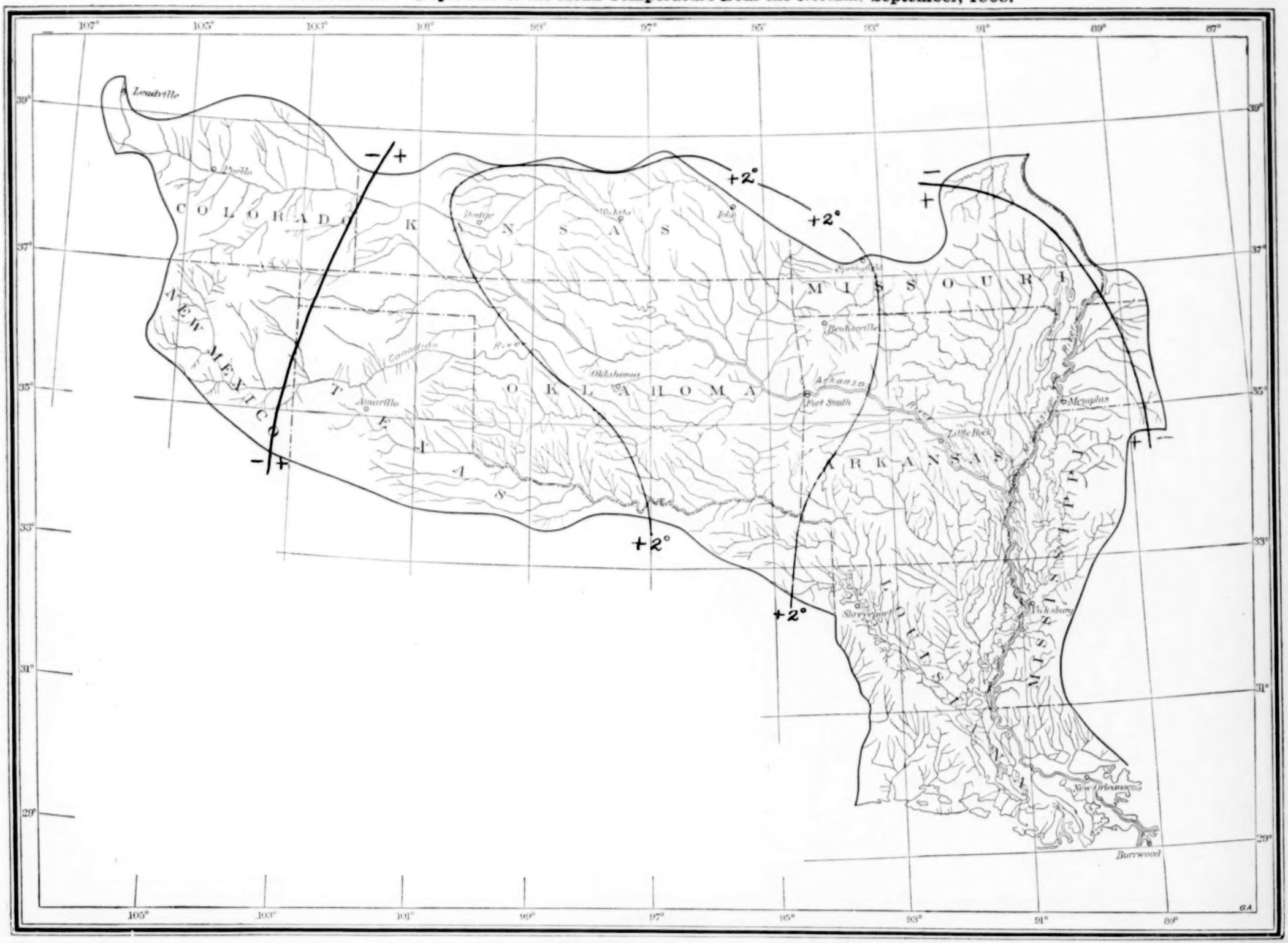


District No. 7.—Total Precipitation, September, 1909.

District No. 7.—Total Precipitation, September, 1909.



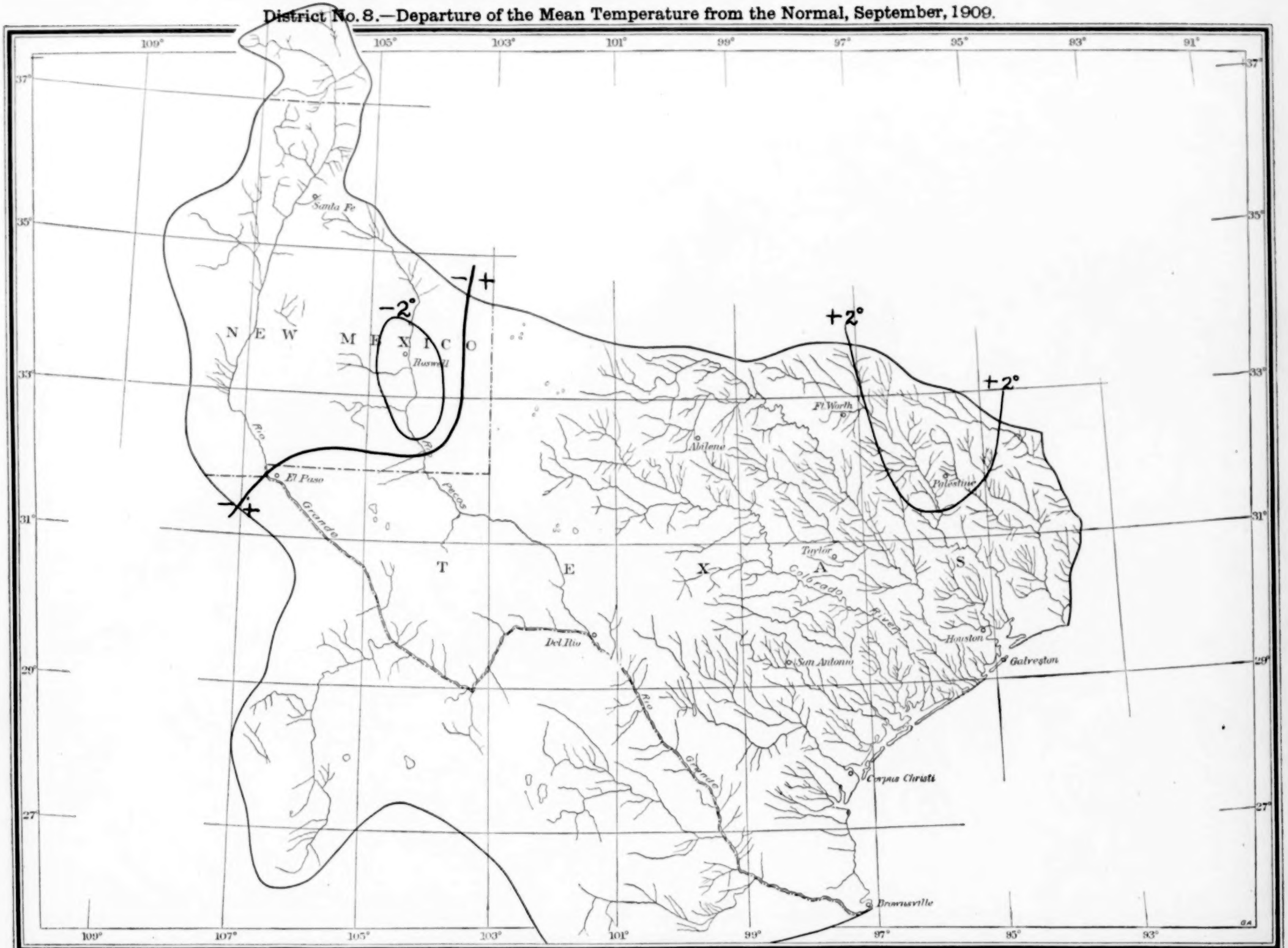
District No.7 .—Departure of the Mean Temperature from the Normal, September, 1909.



District No. 8.—Total Precipitation, September, 1909.

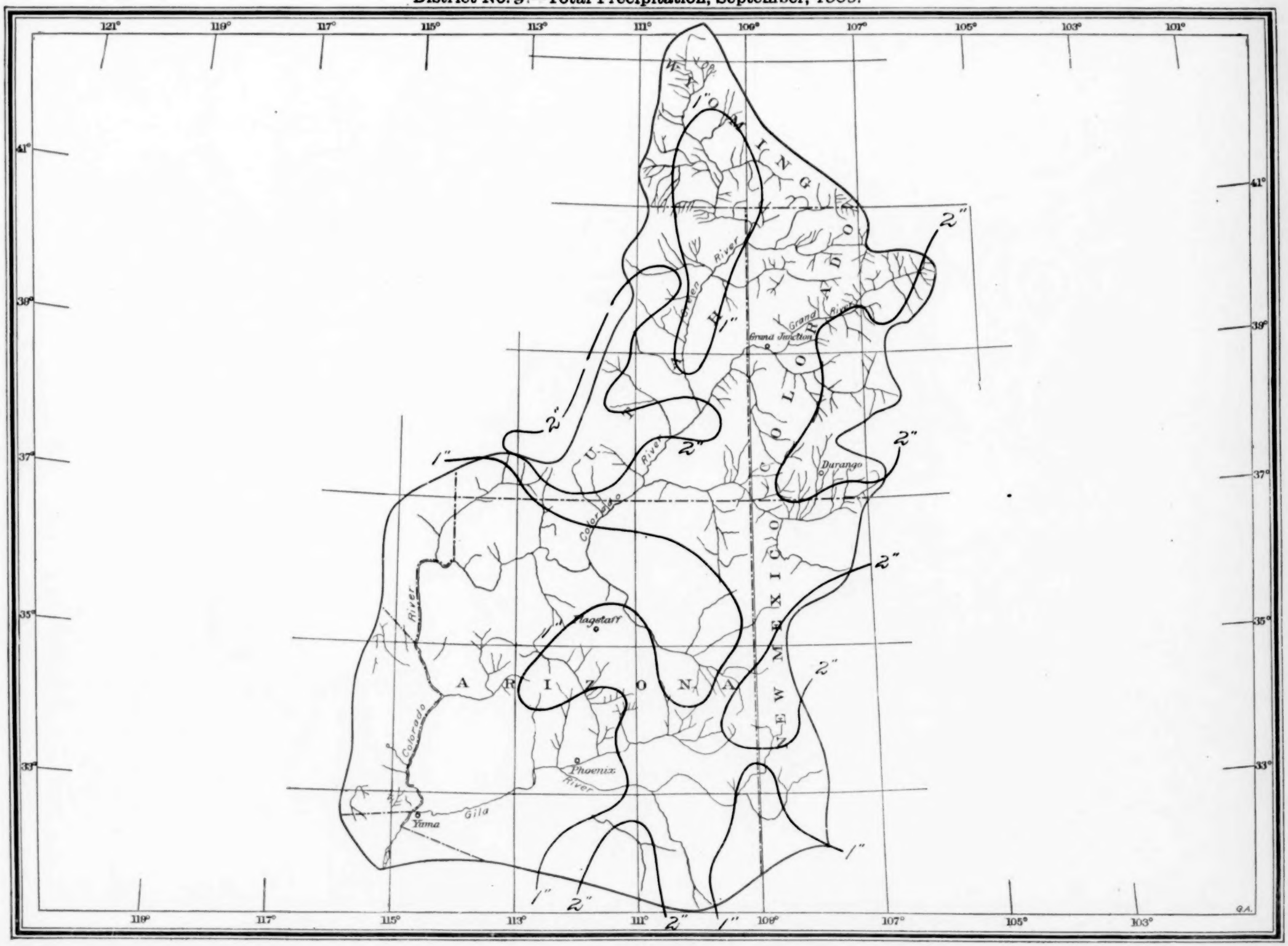
District No. 8.—Total Precipitation, September, 1909.

District No. 8.—Departure of the Mean Temperature from the Normal, September, 1909.

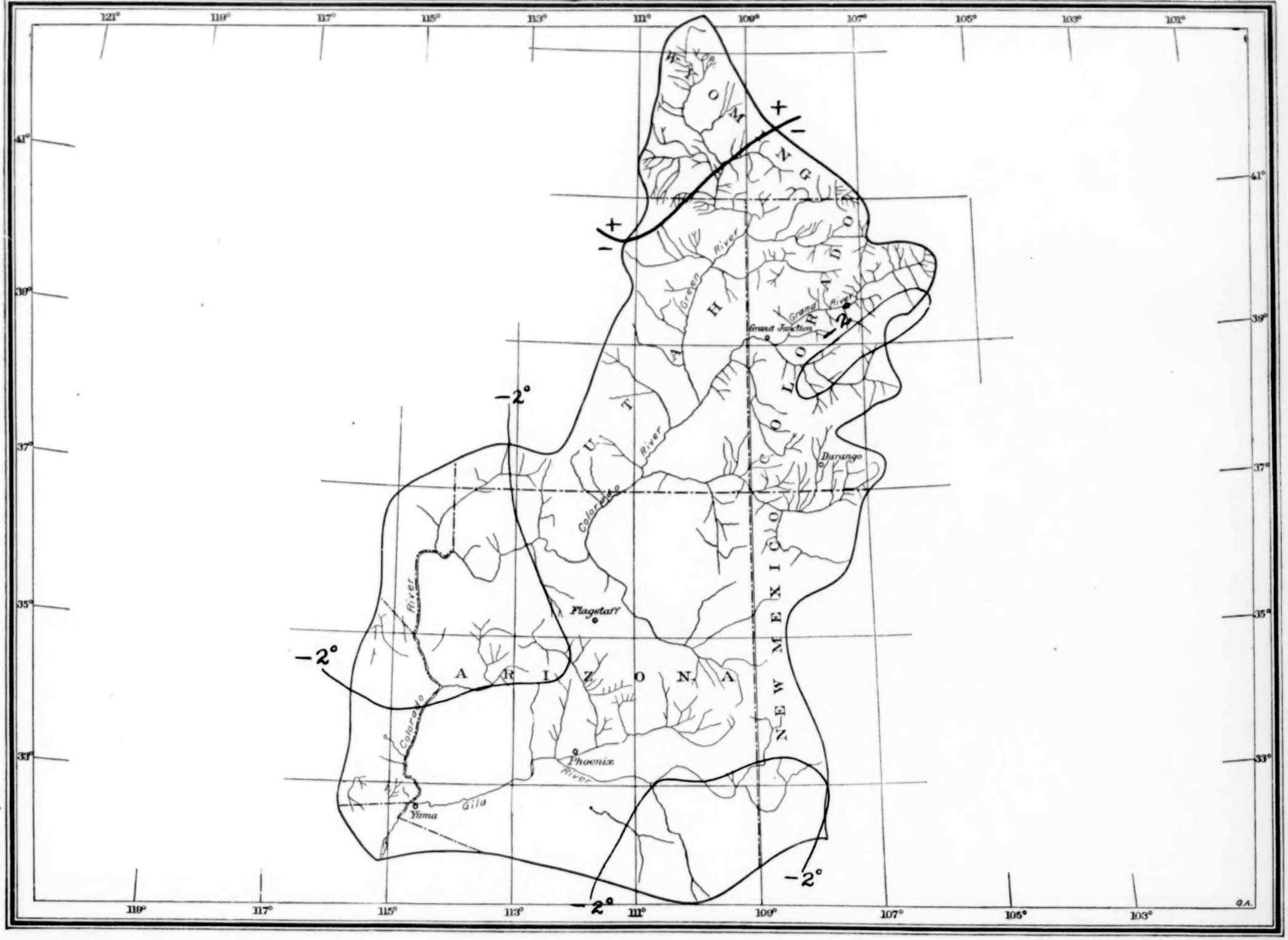


District No. 9.—Total Precipitation, September, 1909.

District No. 9.—Total Precipitation, September, 1909.

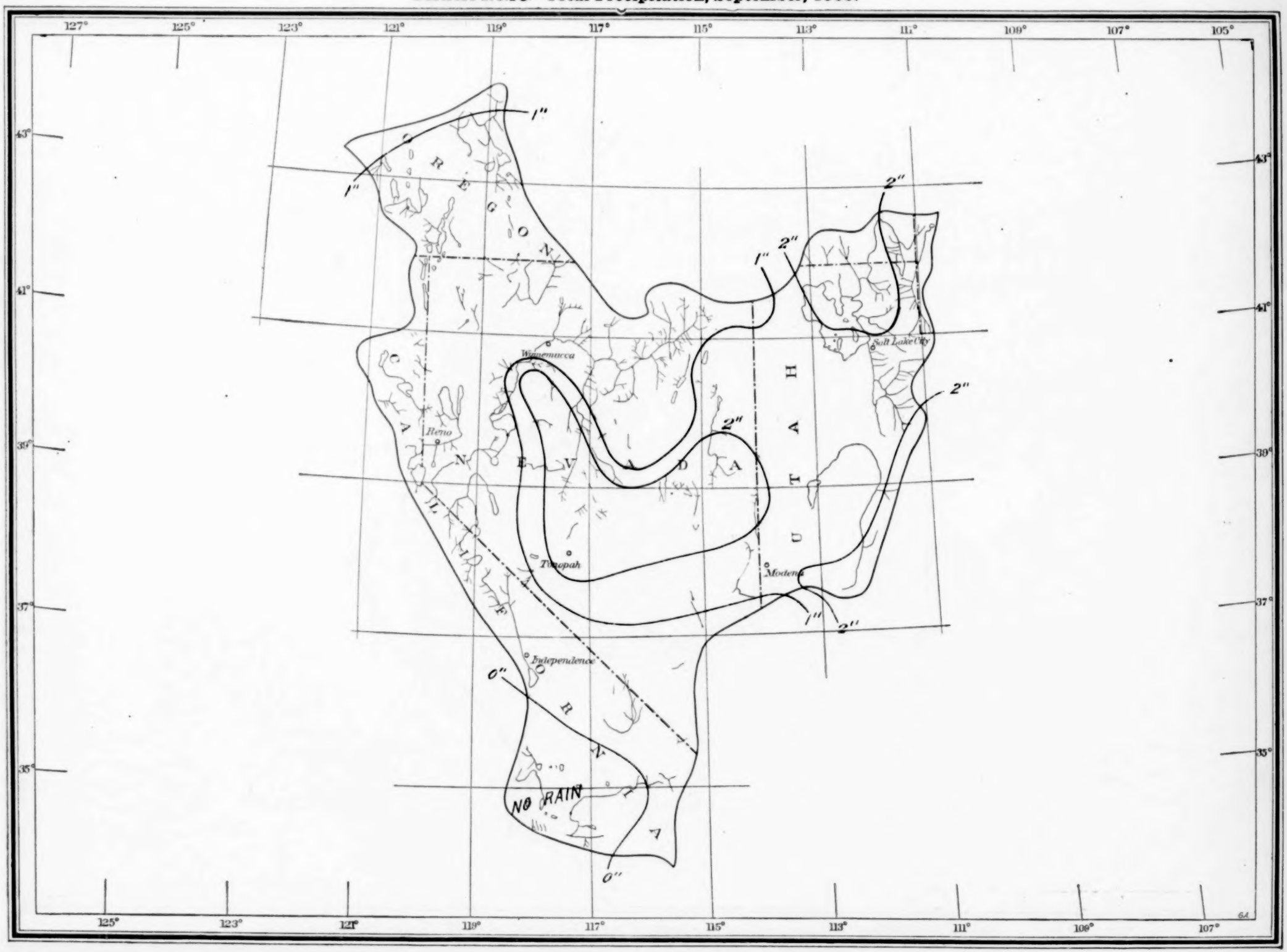


District No. 9.—Departure of the Mean Temperature from the Normal, September, 1909.

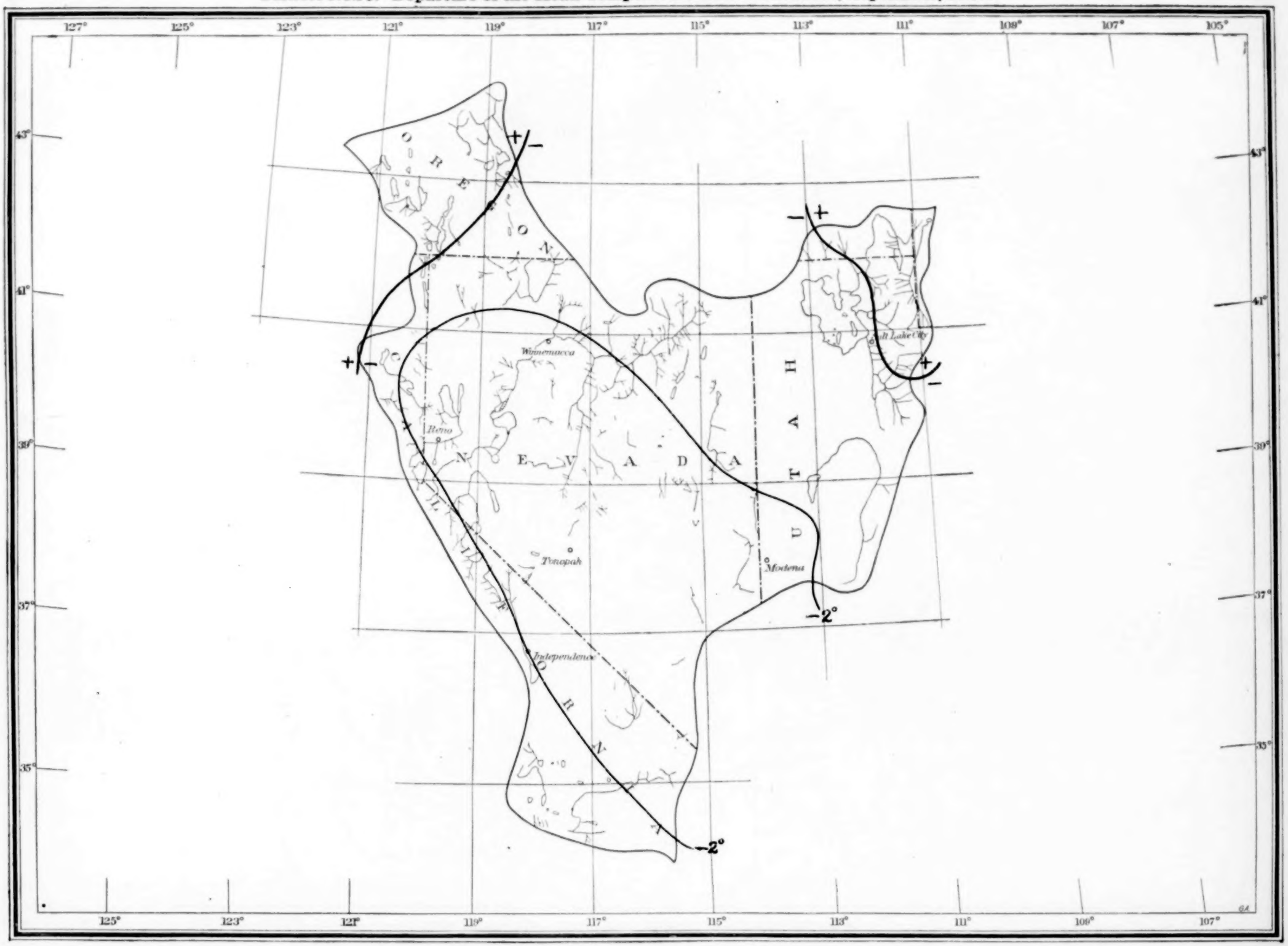


District No.10.—Total Precipitation, September, 1909.

District No.10.—Total Precipitation, September, 1909.



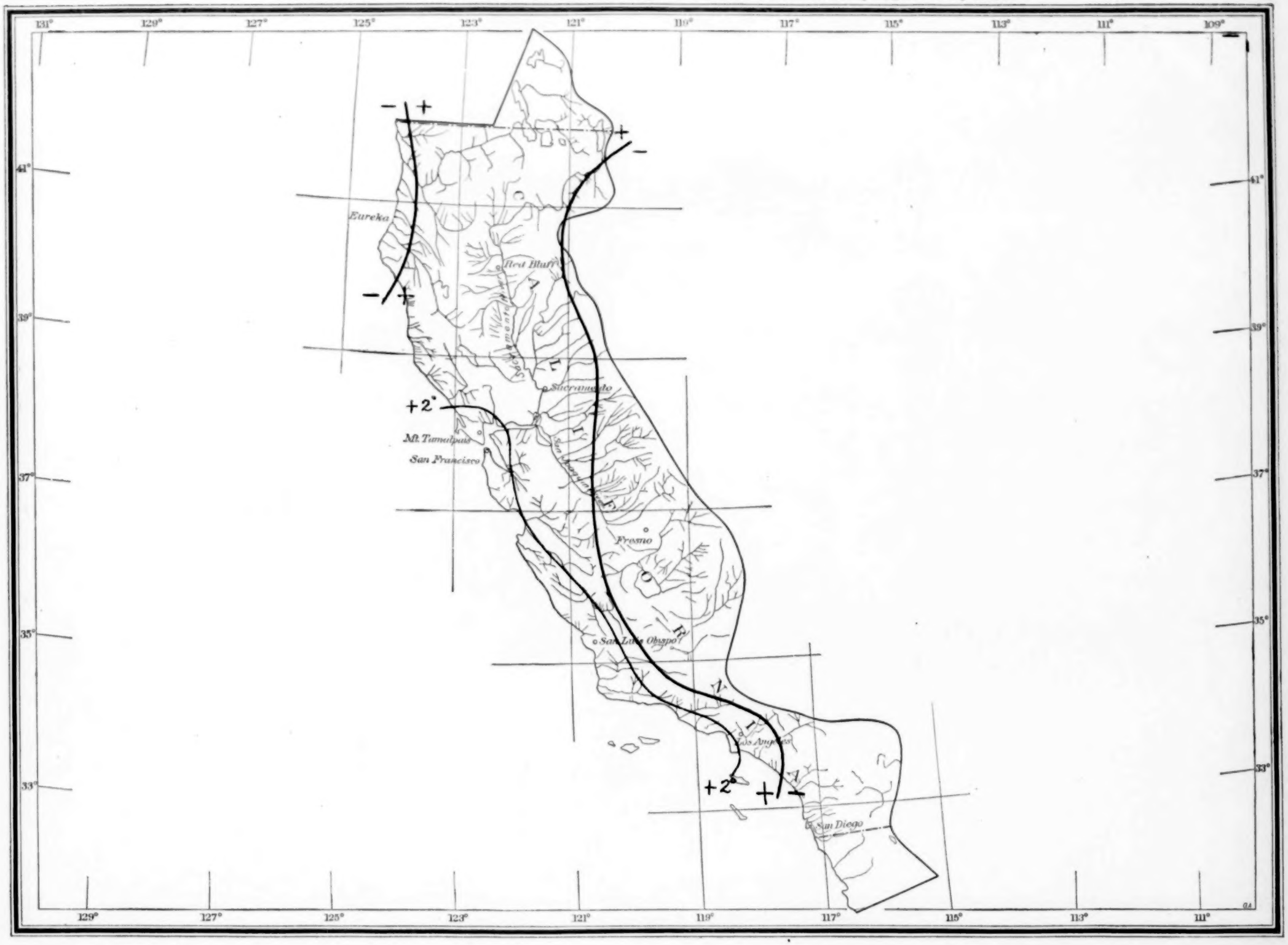
District No.10.—Departure of the Mean Temperature from the Normal, September, 1909.



District No.11.—Total Precipitation, September, 1909.

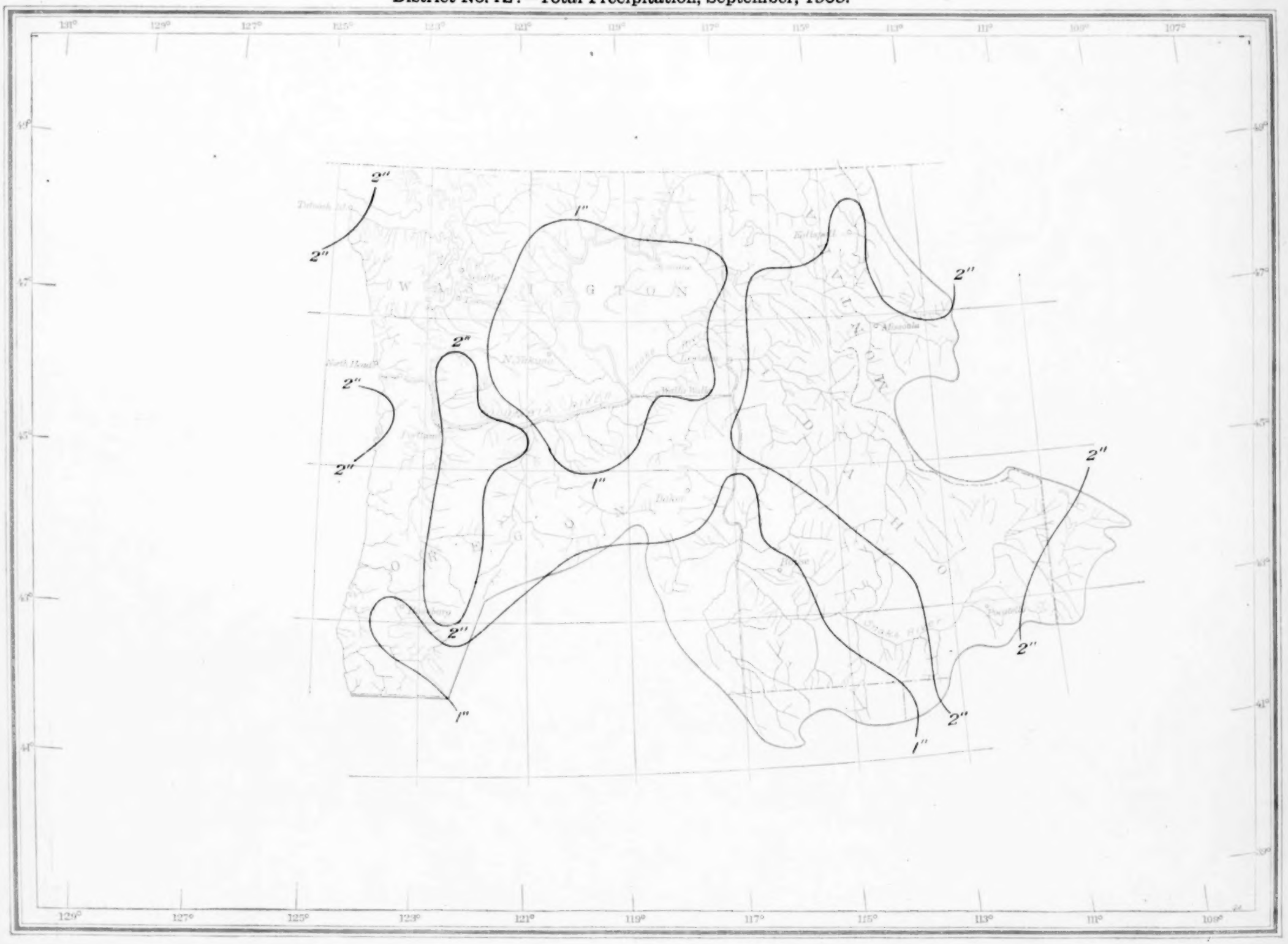
District No.11.—Total Precipitation, September, 1909.

District No.11.—Departure of the Mean Temperature from the Normal, September, 1909.



District No. 12.—Total Precipitation, September, 1909.

District No. 12.—Total Precipitation, September, 1909.



District No. 12.—Departure of the Mean Temperature from the Normal, September, 1909.

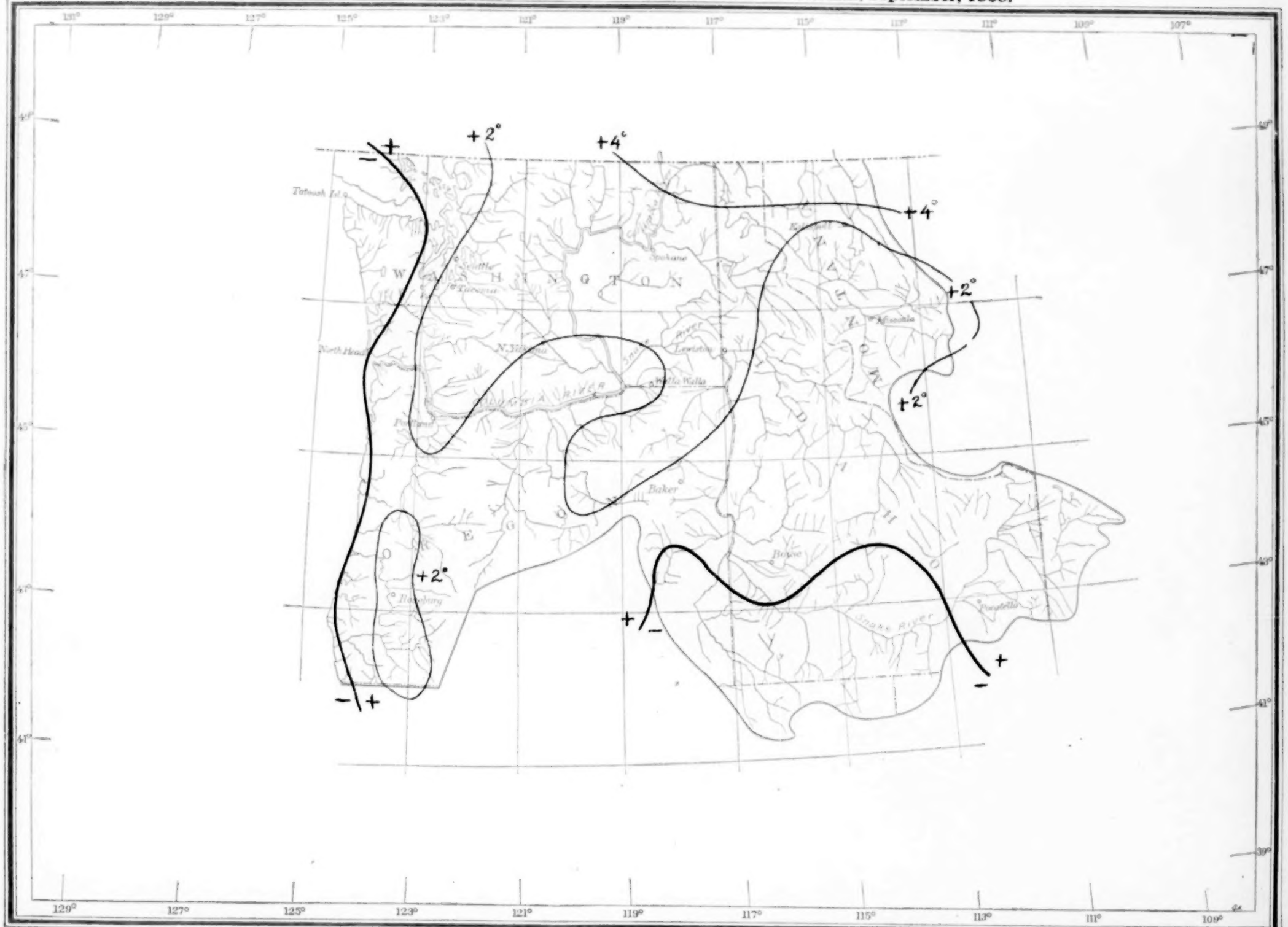


Chart I. Hydrographs of Several Principal Rivers, September, 1909.

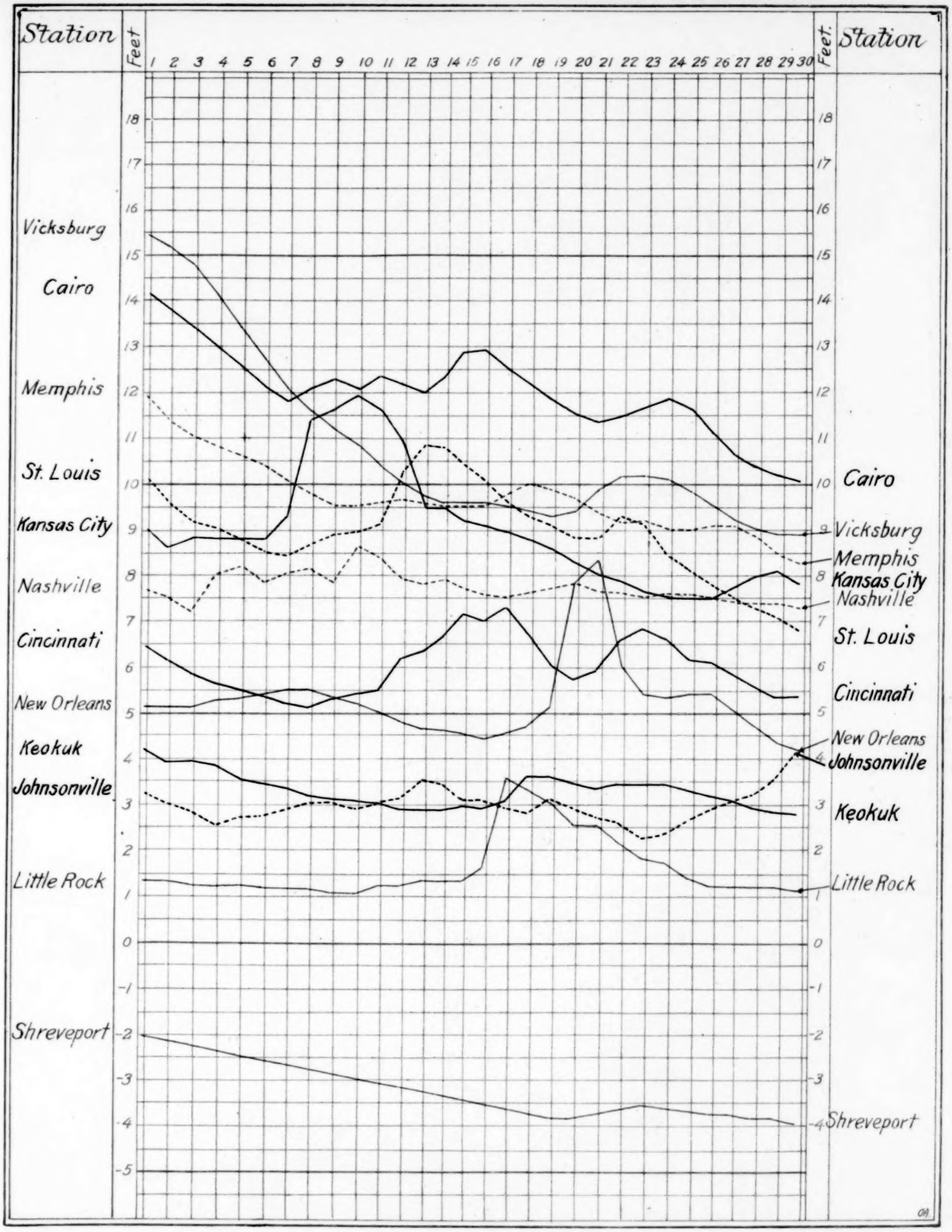


Chart II. Tracks of Centers of High Areas, September, 1909.

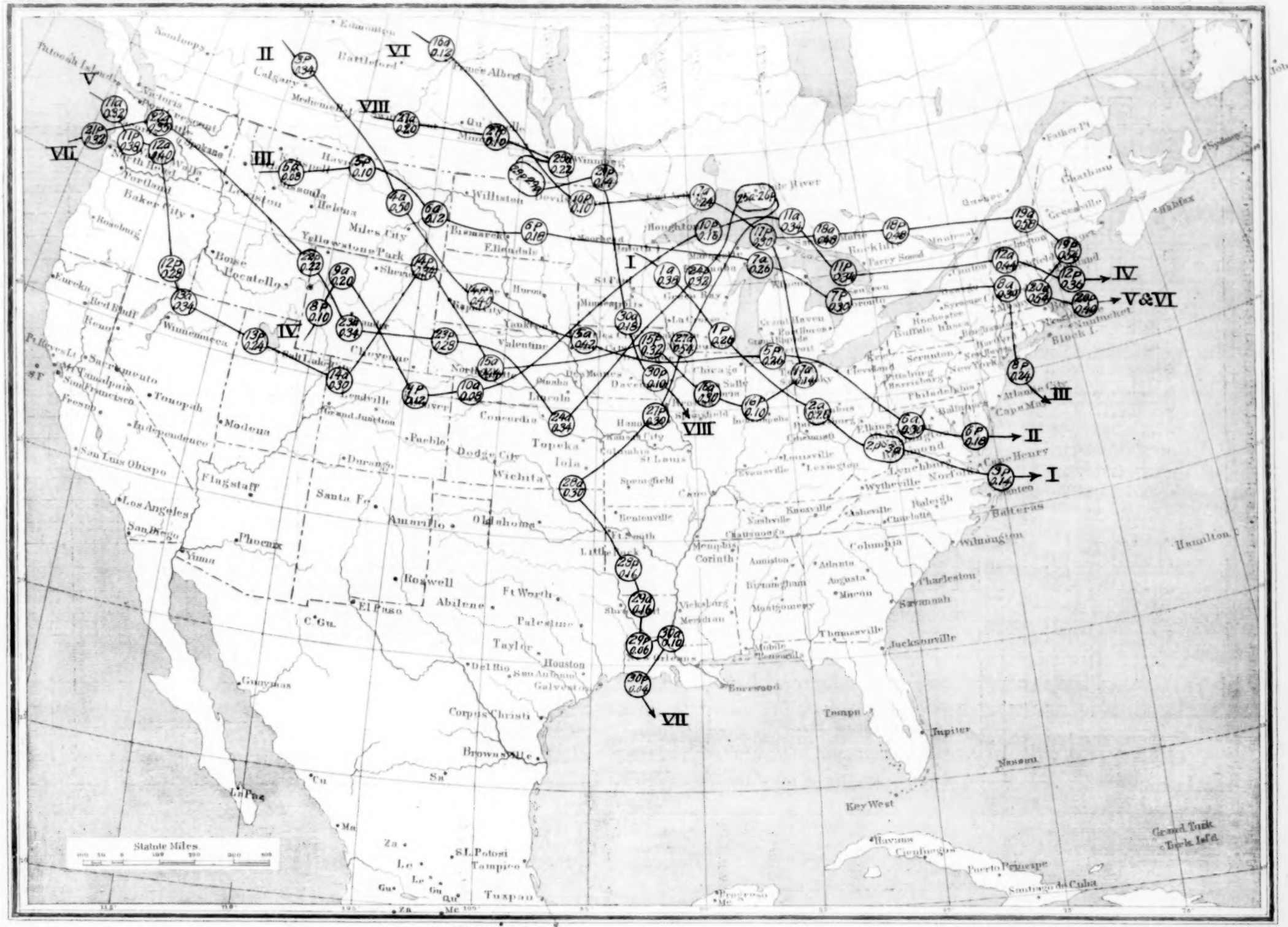
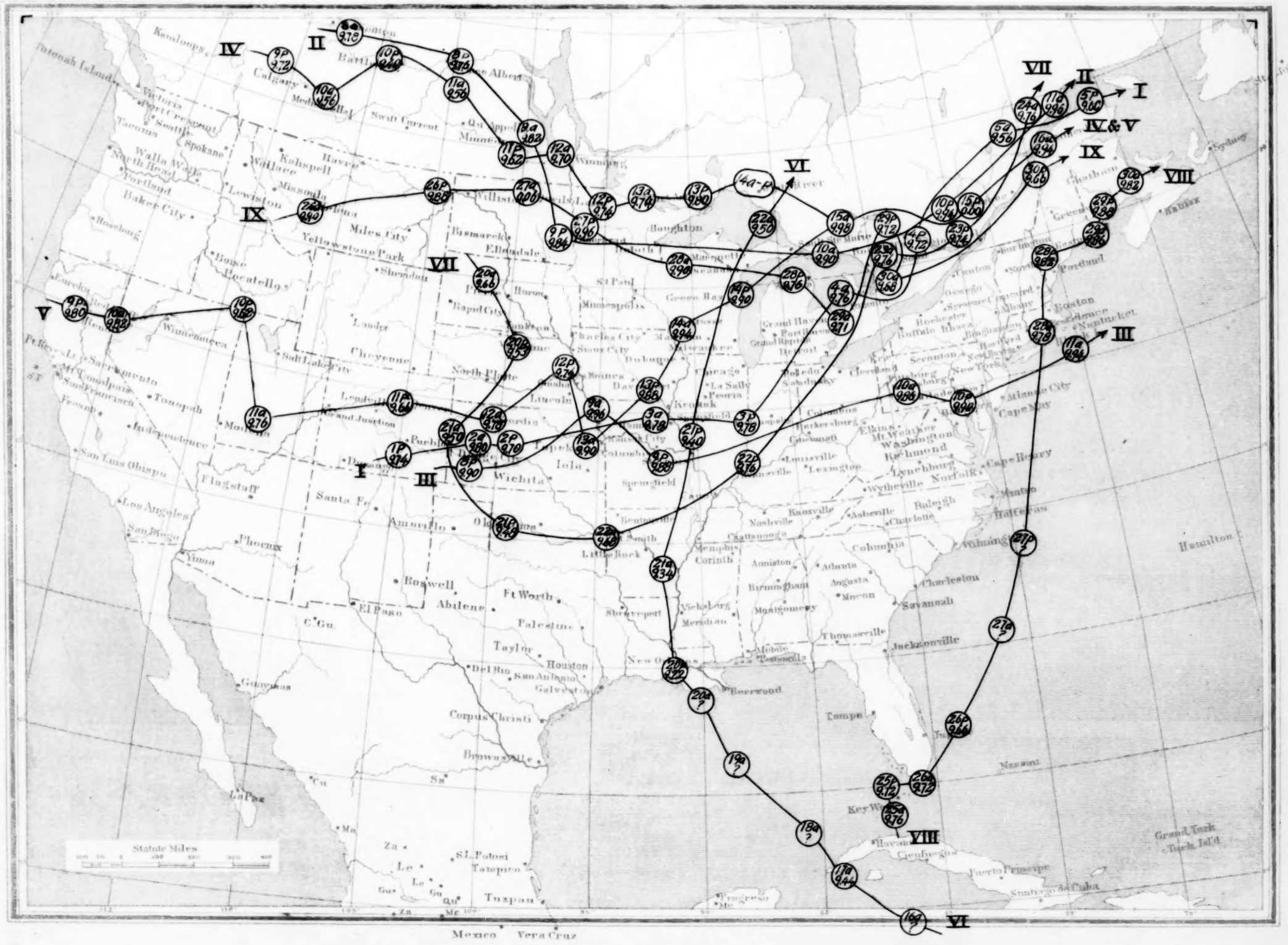


Chart III. Tracks of Centers of Low Areas, September, 1909.

Chart III. Tracks of Centers of Low Areas, September, 1909.



Mexico Vera Cruz

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Chart IV. Departure of the Mean Temperature from the Normal, September, 1909.

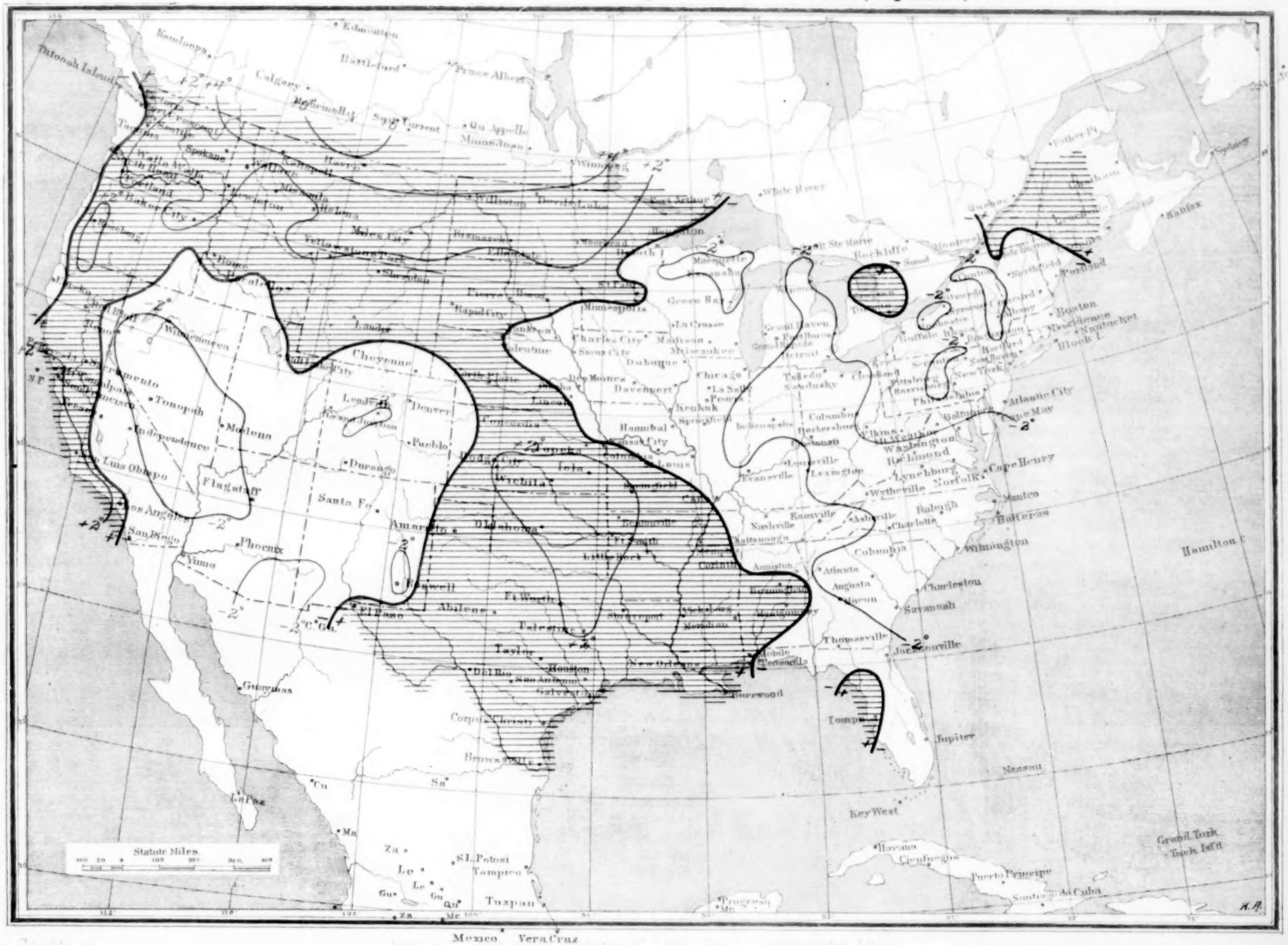

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Chart V. Total Precipitation, September, 1909.

Chart V. Total Precipitation, September, 1909.

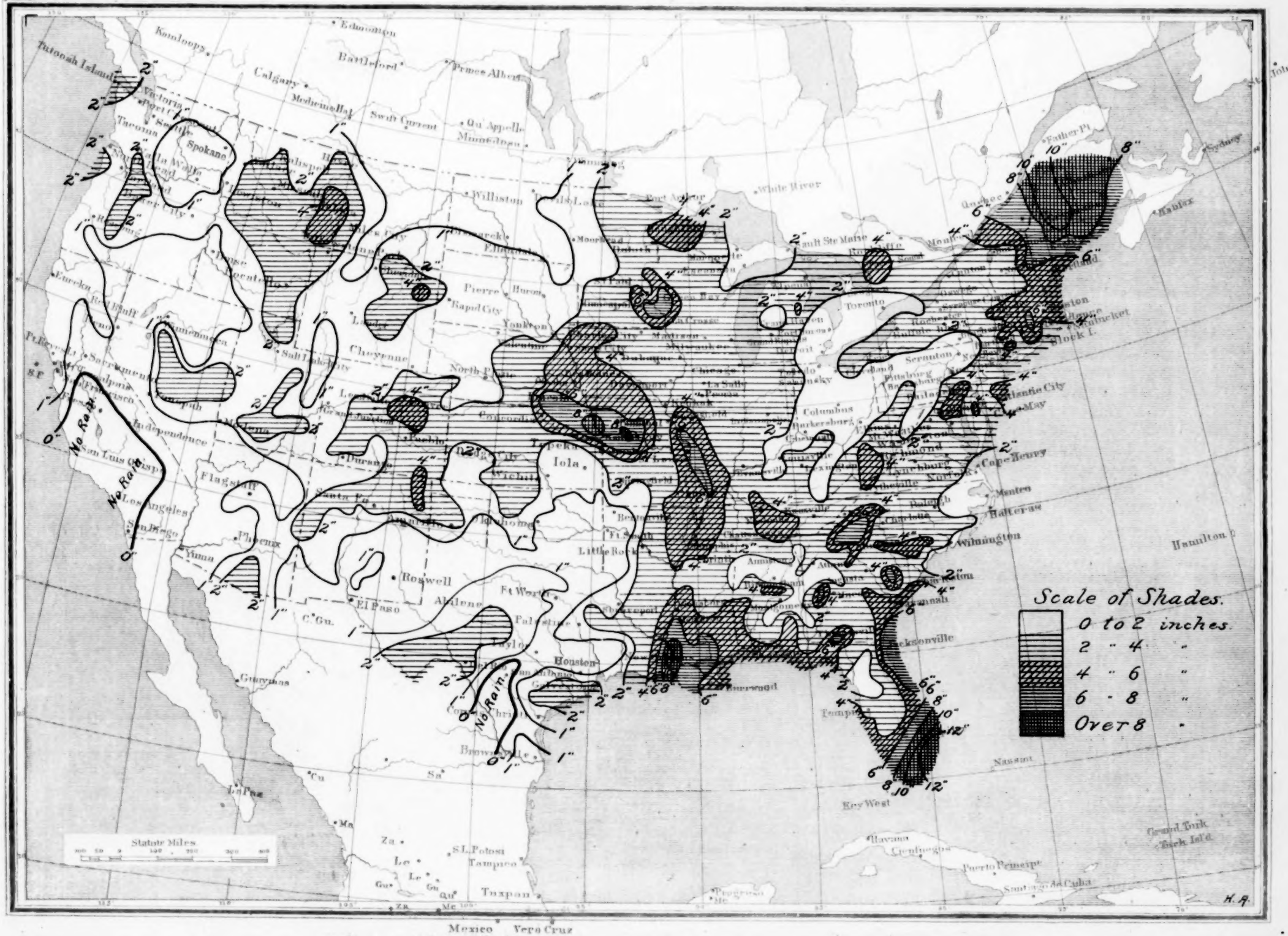

Chart VI. Percentage of Clear Sky between Sunrise and Sunset, September, 1909.

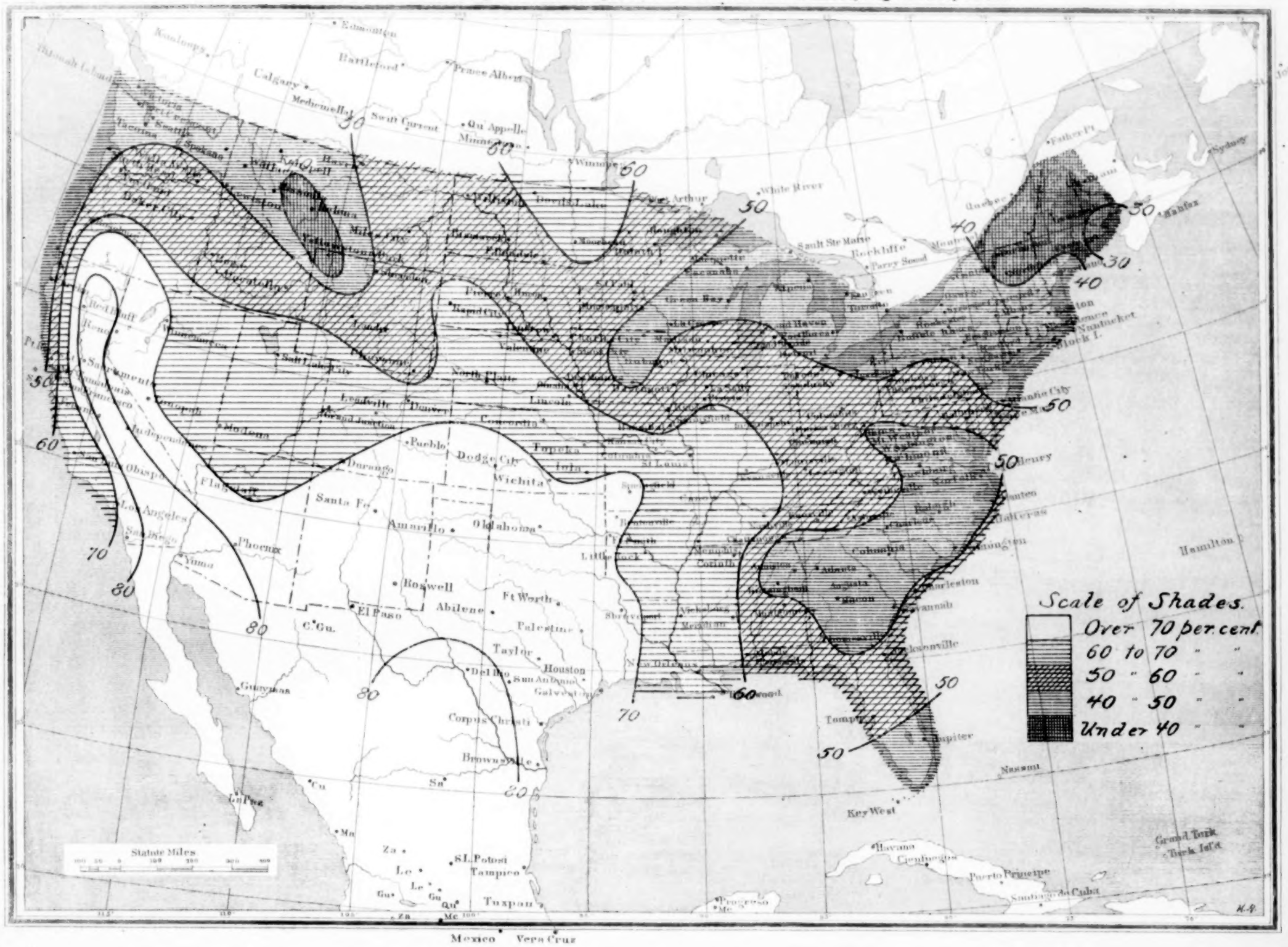

Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, September, 1909.
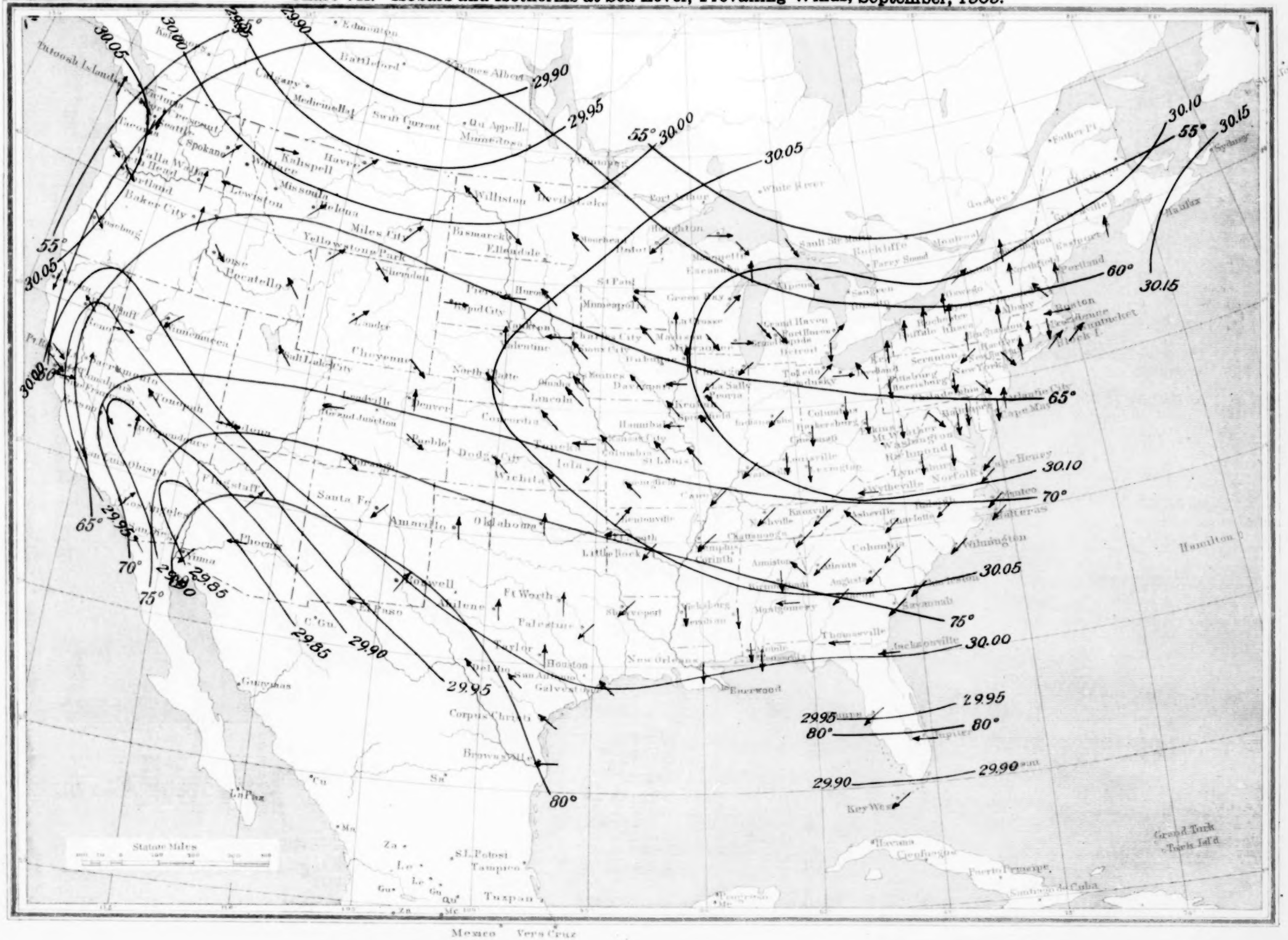
Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, September, 1909.